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ROYAL COMMISSION OF INQUIRY INTO CERTAIN
DEATHS AT THE HOSPITAL FOR SICK CHILDREN AND
RELATED MATTERS.

Hearing held
8th floor
180 Dundas Street West
Toronto, Ontario

The Honourable Mr. Justice S.G.M. Grange

Commissioner

P.S.A. Lamek, Q.C.

Counsel

E.A. Cronk

Associate Counsel

Thomas Millar

Administrator

Transcript of evidence
for

August 30, 1983

VOLUME 25

OFFICIAL COURT REPORTERS

Angus, Stonehouse & Co. Ltd.,
14 Carlton Street, 7th Floor,
Toronto, Ontario M5B 1J2

595-1065



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DEATHS AT THE HOSPITAL FOR SICK CHILDREN
AND RELATED MATTERS.

Hearing held on the 8th Floor,
180 Dundas Street West, Toronto,
Ontario, on Tuesday, the 30th
day of August, 1983.

- - - - -

THE HONOURABLE MR. JUSTICE S.G.M. GRANGE - Commissioner
THOMAS MILLAR - Administrator
MURRAY R. ELLIOT - Registrar

- - - - -

APPEARANCES:

P.S.A. LAMEK, Q.C.)	Commission Counsel
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T.C. MARSHALL, Q.C.	Counsel for the Attorney- General and Solicitor General of Ontario (Crown Attorneys and Coroner's Office)
I.G. SCOTT, Q.C.)	Counsel for The Hospital
I.J. ROLAND)	for Sick Children
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(Cont'd)



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E. FORSTER	Counsel for Phyllis Trayner - Nurse
B. KNAZAN	Counsel for Mrs. M. Christie - R.N.A.
J.A. OLAH	Counsel for Janet Brownless - R.N.A.
S. LABOW	Counsel for Mr. & Mrs. Gosselin, Mr. & Mrs. Gionas, Mr. & Mrs. Inwood, Mr. & Mrs. Turner, Mr. & Mrs. Lutes and Mr. and Mrs. Murphy (parents of deceased children)
W.W. TOBIAS	Counsel for Mr. & Mrs. Hines, (parents of deceased child Jordan Hines)
F.J. SHANAHAN	Counsel for Mr. & Mrs. Dominic Lombardo (parents of deceased child Stephanie Lombardo); and Heather Dawson (mother of deceased child Amber Dawson)
J. SHINEHOFT	Acting for Lorie Pacsai and Kevin Garnet (parents of deceased child Kevin Pacsai)



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---Upon commencing at 10:00 a.m.

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THE COMMISSIONER: Before we start

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I have a couple of announcements I would like to

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make. Firstly, I want to attend the Swearing In of

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new colleagues this afternoon and as a result we will

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recess at 3:30 this afternoon. Secondly, at the

8

I will have something to say about the fees of

9

funded counsel, the meeting that was held last

10

Wednesday night and the article that appeared in

11

the Globe and Mail on Friday morning.

12

Where were we, Mr. Olah, or perhaps

13

Mr. Lamek, did you have something to say?

14

MR. LAMEK: Yes, one thing,

15

Mr. Commissioner, if I may. Mr. Manning in the

16

course of his cross-examination last week referred

17

to a paper by Dr. Soyka on Pediatric Clinical

18

Pharmacology on Digoxin and that paper did not get

19

marked as an exhibit, Mr. Commissioner. I have copies

20

and they have been distributed to counsel and I ask

that that be marked now please.

21

THE COMMISSIONER: Yes, that will

22

be 156.

23

---EXHIBIT NO. 156: Paper by Dr. Soyka on
Pediatric Clinical
Pharmacology on Digoxin.

24

25

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THE COMMISSIONER: Yes, Mr. Olah?

3

4

MR. OLAH: Mr. Commissioner, subject to your views, Mr. Tobias and I have agreed that he would proceed first, sir, is that a problem?

5

6

THE COMMISSIONER: Yes, certainly.

7

DR. RICHARD DESMOND ROWE, Resumed

8

CROSS-EXAMINATION BY MR. TOBIAS:

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Q. Dr. Rowe, a long time ago when you had just started giving your evidence, there was a discussion in your in-chief evidence regarding the nature of the drug digoxin. I just want to quickly cover a couple of points that will clarify my understanding of the actual mechanics of how the drug works.

14

15

16

I understood you to say that what it does in effect is make the heart more efficient, and in making it more efficient as a pumping mechanism, thereby reduces the heart rate, is that a fair summary?

17

18

A. Yes, I think that is fair.

19

20

21

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Q. And I believe in fact that you gave the example, if memory serves me correctly, of an athlete and how he would perhaps have a slower heart rate than one of us mortal individuals because of the heart muscle being stronger it pumped more efficiently, pumping more blood with each beat, is that understanding also correct?



1

2

A. Yes.

3

Q. So correct me if I am wrong,

4

but in short, and this may be an over-simplification,

5

one would not expect to give digoxin if one noted

6

bradycardia in a patient, because I understand

7

bradycardia to be a slow heart beat, is that correct?

8

A. Yes.

9

Q. And conversely, one would expect

10

again acknowledging that perhaps I am over-simplifying

11

it, one would expect to treat with digitalis if one

12

saw tachycardia in a patient, because I understand

tachycardia to be too rapid a heart beat.

13

A. Yes, in broad terms, that is

14

quite fair.

15

Q. So that basically when we are

16

talking about the use of digoxin, and in monitoring of

17

the drug for therapeutic purposes, what we are really

18

trying to do is reach some stage of equilibrium where

19

we have what would be classed in the range as a

20

normal heart beat, or an acceptable heart beat,

21

neither fast nor slow, and that is really what we

are trying to do is put it into proper rhythm, are

22

we not?

23

A. Yes.

24

Q. And in doing so we must, in the

25



1
2
3 ordinary course, because any drug can be dangerous
4 if the concentrations are sufficient, we must monitor
5 the blood level of digoxin to satisfy ourselves that
6 that is not getting too high. Is that as well part
of the exercise?

7 A. I am not quite sure I agree
8 entirely with that. I think monitoring in an unstable,
9 or early status of a sick infant is reasonable. As I
10 think I have said many times the management is the
11 response of the patient rather than the level of
digoxin.

12 Q. However, taking into account
13 that qualification that we are concerned with, the
14 particular response of the patient to that drug, one
15 of the things we would be concerned about at the time
16 of initial treatment when we weren't doing monitoring
17 was levels that were too high, is that correct? In
other words, if the drug seemed to be effective?

18 A. Yes.

19 Q. In regularizing the heart beat,
20 it would be of no particular concern if you saw an
21 extremely low concentration of the drug, would it?

22 A. No.

23 Q. Conversely would it be of some
24 concern if you saw what was considered to be too high
25



1
2 a concentration of the drug in the blood stream?

3 A. Yes.

4 Q. Now, in giving your evidence
5 and in cross-examination I heard you use the term
6 arrhythmias on a great many occasions, specifically
7 with respect to the case of Jordan Hines there was
8 some evidence regarding arrhythmias. Can you give
9 me a definition of that term?

10 A. Well, arrhythmia really means
11 something that is not a regular rhythm, it means
12 absence of regular rhythm.

13 Q. So is it possible that there
14 would be arrhythmia in both the bradycardic and the
15 tachycardia condition?

16 A. There may be.

17 Q. And as I understand it the
18 heart, and this goes back again to your initial
19 evidence, is basically a four chambered muscle,
20 with two receiving chambers and two pumping chambers?

21 A. Yes.

22 Q. Now in the normal heart with
23 the normal conductive system, one would expect the
24 rhythm to flow from atrium to ventricle, is that
25 correct?

A. Yes.



1

2

3

Q. And you have also used the
term fibrillation. Can you give me a definition of
that?

5

6

A. Fibrillation is a chaotic
contraction of muscle.

7

8

Q. Chaotic in the sense that it is
irregular?

9

10

11

A. Irregular.

Q. Could it also describe a
beat that was not normal in terms of this rhythm going
from atrium to ventricle?

12

13

14

A. Yes.

Q. In other words, that would be
chaotic as well?

15

16

17

A. If the rhythm, if the fibrilla-
tion was at atrium level then the ventricular response
would be variable.

18

19

Q. So in other words, we could
have fibrillation in either the atrium or the ventricle?

20

A. Yes, it is much more important
in the ventricle.

21

22

Q. And we could have it on either
side, is that correct?

23

24

25

A. Yes.

THE COMMISSIONER: I don't quite get



1
2 the distinction because fibrillation which is
3 obviously not a regular rhythm either, the arrhythmia
4 is not ---

5 MR. TOBIAS: I'm sorry,
6 Mr. Commissioner, I'm having some trouble hearing you.

7 THE COMMISSIONER: I was trying to
8 get the distinction between the arrhythmia and the
9 fibrillation, and I know it may not be that important
10 that I know, but when does an irregular rhythm become
11 arrhythmia, and when does it become fibrillation?

12 THE WITNESS: Well, a fibrillation
13 is an arrhythmia.

14 MR. TOBIAS: Q. It is a form of
15 arrhythmia?

16 A. It is a form of arrhythmia.

17 Q. And how do you distinguish
18 it from other forms of arrhythmia?

19 A. Well, it has characteristic
20 features. If it is ventricular fibrillation there is
21 no output from the heart, so it is distinguished from
22 slow, slower arrhythmias with an effective beat. The
23 characteristic of fibrillation is it is not a good
24 expulsion mechanism for any chamber of the heart.

25 Q. In effect, if I understand
what you have just told the Commissioner, fibrillation



1
2
3 is a particular kind of arrhythmia?

4 A. Yes.

5 Q. Now before you were saying
6 that a ventricular fibrillation is much more important
7 than an atrial fibrillation. Can you tell me why,
8 can you explain why that is?

9 A. The reason is that because if
10 the atrium is fibrillating there is still impulses
11 that can effectively contract, or cause contraction
12 of the ventricle. But if the ventricle is fibrillating
13 it is not going to contract in any effective way at
14 all. That is because the fibrillation is confined to
15 one or other chambers.

16 Q. And the ventricle, am I correct,
17 is the pumping chamber?

18 A. Yes.

19 Q. So if it is not contracting
20 the heart isn't pumping blood out of the lungs?

21 A. That is correct.

22 Q. And to the other parts of the
23 body?

24 A. That is correct.

25 Q. And that is why you say that
it is so much more important than atrial fibrillation?

A. Yes.



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Q. Now, defibrillation, I believe we had a discussion about that term. Now, I would take it from its very name that it is a method of treating, or correcting fibrillation or chaotic contractions, is that correct?

A. Yes, it is.



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Q. And is it an electrical shock,
is that basically what that treatment is?

A. Yes, it is.

Q. And whenever we hear the term
defibrillation, are we referring to an electric
shock?

A. Yes, the term is used sometimes
rather loosely in medical records, but defibrillation
means an electrical shock is being applied. But the
proper term is cardioversion because it may not be
used to change a fibrillation back to normal and it may
be used to change a very rapid rate without
fibrillation back to normal.

Q. I take it, though, that you cannot
defibrillate by using drugs. The method itself
presupposes the use of electrical shock?

A. No, you can defibrillate atrial
fibrillation by the use of medication, but it is a
slow process and the only reason you can do it in the
atrium is because the patient is still pumping blood
so he is able to survive. But if it is at the
ventricular level, then you have got to do something.
You cannot wait for drugs.

Q. In other words, an atrial
fibrillation, because we are still getting contraction,



B2

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you have got the time to treat it--

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A. Yes.

4

Q. -- with a slow producing

5

response by drug ?

6

A. Yes.

7

Q. Whereas the more serious

8

ventricular fibrillation requires more immediate

9

treatment because you are not getting pumping of the
blood?

10

A. Yes.

11

Q. Could you also explain for me

12

the term pulmonary edema?

13

A. Pulmonary edema is a term used

14

to indicate that there is fluid in the air sacks of

15

the lung, which normally is not there. There is a

16

very slight lubricant action but this is a complete

17

filling up of the air sacks of the lung with fluid

18

which comes from the circulation.

19

Q. Now, I take it that one of the

20

functions of the heart is to act as a pump, as it

21

were, in pumping off liquid from the lungs; is that a

fair statement?

22

A. Well, if there is a back-up of

23

blood in the lungs, then there is a tendency to get

24

pulmonary edema. So that in the sense that if you do

25



B3

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2
3 not have that back-up and your pump is working all
4 right you will not get pulmonary edema, that is
5 correct.

6 Q. So that pulmonary edema really
7 is a consequence of a form of heart failure, is it
8 not?

9 A. Yes, it usually is, but it
10 sometimes can be from other causes, direct injury to
11 the lung and so on.

12 Q. Yes. Now, when it is not a
13 result of direct injury to the lung, when in fact
14 pulmonary edema is caused by heart failure, is it
15 fair to say that what we are getting in effect is a
16 type of arrhythmia in the heart?

17 A. No.

18 Q. All right. Is it fair to say
19 that we are getting a fibrillation?

20 A. It might be that, but the usual
21 explanation is that the pumping chamber on the left
22 side is just not pumping well and that could be due
23 to a number of causes, which admittedly some might be
24 of the type you are referring to.

25 Q. Are you then suggesting that
it is not so much the absence of a contraction as it
is the inappropriateness of that contraction?



B4

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A. Or that the contraction is not ---

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Q. It is not forceful enough; it is not doing the job and therefore the fluid cannot get off the lungs?

6

A. That is correct.

7

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Q. So am I correct in understanding that there is, in general terms, some type of relationship in a general sense between respiratory problems and suspected heart problems? In other words, would a physician treating a patient, a baby, for respiratory problems, make inquiries in the ordinary course regarding his heart function?

13

A. Yes.

14

15

16

Q. And certain tests would be done in order to rule out a heart problem; is that not also correct?

17

A. That is usually so.

18

19

20

21

Q. All right. And as a matter of fact, if one were suspected of having pneumonia, would it not be prudent to conduct certain inquiries regarding the heart performance of that patient in order to eliminate that possibility?

22

23

A. Yes, the sort of things that are a starter, what you find on physical examination.

24

25

Q. Now, with respect to the



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3 admission of Jordan Hines to Ward 4B, in light of
4 what we have been saying regarding a relationship
5 between respiratory problems and some suggested heart
6 complications, you would not find anything particularly
7 unusual in his admission to the heart ward, would you,
8 to the cardiac ward?

9 A. No.

10 Q. Especially where we had instances
11 of apnea and bradycardia?

12 A. Yes.

13 Q. And that was his history on
14 admission to the hospital, was it not?

15 A. Yes, it was.

16 Q. If you can refer, Doctor, to page
17 57 of the chart of Justin Cook, which was Exhibit 116.
18 Now, there was some discussion during your In-chief
19 evidence regarding the symbols that appear on these
20 computer print-outs of drug assays.

21 If I can direct your attention for one
22 moment to the legend that appears at the lower left
23 hand corner of that page wherein the symbols A1, B1,
24 C1, D1, E1, F1, G1 and H1 appear, you will notice that
25 on the blood sample taken on March 22nd at 6:00 a.m.,
which is the second column from the right of the page
or the fourth column, as we move left to right, on the



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line for digoxin there is a notation "See E." Can you see that, Doctor?

A. Yes, I can.

Q. And if we look at the legend at the lower left hand corner of the page, it would appear that ---

THE COMMISSIONER: Sorry, is it page 57 I should be looking at?

MR. TOBIAS: Yes, sir.

THE COMMISSIONER: I see digoxin. I thought the comment was under calcium. Have I got the lines wrong?

MR. TOBIAS: Q. All right, perhaps I can ask the witness that question. The comment line appearing above digoxin where "See E" and "See F" are referred to, are they referring to digoxin or to calcium?

A. I think E is referring to calcium.

Q. So it would be the comment line below digoxin where we see the notations "See G" and "See H".

A. Yes.

Q. Which would refer to digoxin; is that correct?

A. I think so.

Q. All right. Now, on the line for calcium there is a specific notation, "See E", and if we



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2
3 looked at the legend on the lower left hand corner of
4 that page, E specifically refers to postmortem blood;
5 is that correct?

6 A. Yes, I think so.

7 Q. I see no such notation for any
8 of the samples as they relate to digoxin testing.
9 Now, Doctor, this is a fairly simple question. Is
10 that because there was simply no information as to
11 whether it was ante or postmortem blood, or can we
12 assume by the absence of a notation that it is post-
13 mortem blood, that all those samples are antemortem
14 blood?

15 A. I am not sure, but I think they
16 are antemortem, but I do not know.

17 Q. Well, we know that the March 22nd,
18 1981, 4:30 a.m. sample is clearly ante mortem because
19 we know that the time of death of Justin Cook was
20 4:56. I would have thought that the next sample
21 taken at 6:00 a.m. was clearly post mortem; am I not
22 correct?

23 A. Yes, if those times are correct.
24 I cannot remember the specific times.

25 Q. So is it not fair to conclude
from that that with respect to digoxin particularly,
the absence of using the legend E does not



1
2 necessarily mean that all the samples were ante
3 mortem; it just means that they did not note for
4 some reason whether they were pre or post mortem?

5 A. I think so.

6 Q. I also ask you to look at
7 page 88 of the chart.

8 THE COMMISSIONER: This is still the
9 Cook chart, is it?

10 MR. TOBIAS: Of Justin Cook.

11 THE COMMISSIONER: Yes. I know I am
12 fighting a losing battle, I would like it to be
13 "record" instead of "chart" because otherwise -- that
14 is what I call a chart, you see. This is what I call
15 a record.

16 MR. LAMEK: That is a graph.

17 THE COMMISSIONER: All right, I am
18 corrected on that. Maybe we will just strike this
19 word "chart" out of the language because it means
20 too many things. However, I am just being sticky.
21 Do not pay any attention to that.

22 MR. TOBIAS: Yes, Mr. Commissioner.
23 Perhaps it will save everyone a lot of confusion if I
24 simply refer to the medical record and there can be
25 no doubt as to what I am referring to if I use that
phraseology.



1
2 THE COMMISSIONER: Okay.

3 MR. TOBIAS: Q. Again at page 88 of
4 the medical record of Justin Cook we see the same
5 type of computer print-out, and again, with respect
6 to the line for digoxin, there does not appear to be
7 any noting on that report of whether we are dealing
8 with a postmortem blood sample or a premortem blood
9 sample, and yet we do see that on the legend there are
10 certain symbols which would denote postmortem blood.
11 So again, we can assume that that particular
12 information simply was not noted on this computer
13 print-out; is that correct?

14 A. Yes, I would read it that way.

15 Q. And can I take it, without
16 specifically referring you to them, that essentially
17 at pages 93 and 104 of the medical record, which
18 again are examples of the same computer print-out,
19 again because there is no reference to postmortem
20 blood, that does not necessarily mean that some of
21 those samples are not antemortem; is that correct
22 as well?

23 A. Yes, I think so. You would have
24 to know the times.

25 Q. Now, if I can refer you back to
the page where we started in the medical record,



1
2 of Justin Cook, in the line that says "Clinical
3 Chemistry, Interim Report", on the right hand side
4 there is a date and a time noted, and I am somewhat
5 confused by the evidence that has been given thus far
6 regarding the significance of that time. Is the
7 time noted as 14:02 hours the time that the computer
8 printed this report out or is that the time that the
9 results were passed on the doctors who had requested
the readings?

10 A. I am not sure, but I have always
11 taken that to be the time that the print-out is made.

12 Q. Is it in any way related -- my
13 next question was, is it in any way related to the
14 time that the assays were done?

15 A. I do not know that. I think the
16 only person who can answer that question that I know
17 is know Dr. Ellis.

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THE COMMISSIONER: I think Dr. Ellis, I thought he did answer it, but maybe I'm wrong. I thought he answered it. He said that they phoned in the results daily and this computer printout came out the next morning. However, he is coming back, am I not right?

MS. CRONK: Yes, he is, Mr. Chairman.

MR. TOBIAS: Perhaps we can make a note to clarify that by asking Dr. Ellis. I am aware of the danger lest Mr. Scott feels he has to remind me about how dangerous speculation can be. But I wonder if you just might engage me for a moment, Doctor. Assuming that you are right, that 14.02 hours refers to the time that the computer page was printed out, would it be safe to assume that the assay would have to be done at some time before 14.02 hours?

MR. SCOTT: That's a speculation that I think might be permitted.

MR. TOBIAS: Thank you, sir.

THE WITNESS: Yes, I think that is probably fair to say.

MR. TOBIAS: Q. You think that is a fairly safe assumption.

Now, with respect particularly to the sample of March 21, 1981, which indicates that there



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was no time noted as to the hour of collection, and that would be the very first column as you look down the page, I notice that there is no reading whatsoever with respect to a digoxin level. What I am curious about is whether that means that there was no assay for digoxin done with respect to that particular sample, or whether an assay was done and there was simply a negative reading obtained. Can you assist me?

A. Well, as I read that it is a sample of urine and, therefore, there would not be a level of digoxin taken on that, and I think the results from that are in the very lowest portion of that column.

Q. All right. And as well it would appear that with respect to the sample taken at 7 a.m. on March 22nd, which, if I am not mistaken was a blood sample, there was a reading of less than .2 nanograms and, in fact, if the digoxin assay is run and we get a negative finding, is that not the symbol that we would expect to find report on the computer printout?

A. You mean the value?

Q. Yes.

A. Yes.

Q. All right.

MR. LAMEK: Mr. Commissioner, I am



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sorry to interrupt my friend, but lest there be any misunderstanding, that sample we have identified I think as the contents of the IV bag.

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THE COMMISSIONER: Yes.

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MR. TOBIAS: Yes, I'm aware of that.

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MR. LAMEK: Okay.

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MR. TOBIAS: Q Now, what I am somewhat confused about, Dr. Rowe, is that in your in-chief evidence, it was made clear that the sample that I have just referred to, and I am referring to Specimen No. JO5480, taken at March 22nd, 7 a.m.. I thought we had established that indeed that sample was done on the IV fluid. The note F appearing above that readout, if we consult the legend at the lower left-hand side of the page, indicates IV fluid. But did I not understand your answer before to indicate that the comment line that that Note F appears in is relating to calcium and not digoxin?

18

A. In the previous sample?

19

Q Yes.

20

A. Yes, but each sample would have its own comment line, its own letter, or whatever.

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Q No, no, I understand that. What I am saying is that the comment "see F" which is indicative of IV fluid, does that not relate to a comment on the



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calcium line as opposed to a comment on the digoxin line?

THE COMMISSIONER: It's for all of them though, isn't it. Am I not right, B and D and F, are all IV fluid, the whole thing is IV fluid, isn't that what it means?

MR. TOBIAS: You, Mr. Commissioner, I think are referring to the ---

THE COMMISSIONER: Am I doing this wrong?

MR. TOBIAS: To the comment line on electrolytes.

THE COMMISSIONER: All the comments, as I look at them, B and D and F, are all IV fluids and that would seem to me, and perhaps I misunderstood it, that the whole sample was IV fluid.

(2) MR. TOBIAS: All right. Well, you may have anticipated my next question. I was trying to determine what it was in the chart that satisfied you, Dr. Rowe, that indeed Specimen No. JO5480 was IV fluid?

A. Well, what satisfies me is B and D, but the point about the position that you are making about F is indeed it is on the comment line for calcium.



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Q Yes. It it your understanding that that particular comment "see F" relates to calcium or digoxin?

A Well, I would have thought that it was digoxin, but you are correct, it seems to be related to calcium.

Q All right. so, what is there in the chart specifically then that tells us that that particular sample with respect to digoxin levels, was it run on IV fluid. Is there anything specifically in this chart that tells us that?

A I think at least two of those, or three of those letters do say IV fluid.

Q Yes, that's correct.

A Yes.

Q I believe B-1 indicates IV fluid and D-1 indicates IV fluid, but where I'm getting confused is that B appears to be a comment on the electrolytes; D appears to be a comment on glucose and F appears to be a comment on calcium. I see no reference to digoxin in the chart and that is the quandary that I find myself in and I'm asking you if you can assist me at all in the interpretation of the chart in clarifying that?

A Well, I see your point. The only



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problem that I would have is that I'm not sure whether they would report calcium or digoxin as less than .02 unless it was digoxin they were testing.

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Q All right. There is no question that the reference to less than .2 would appear to be a reference to digoxin. What I'm really saying, Doctor, is this. Can we be satisfied in our own minds that that sample was run on IV fluid and not on blood or urine or some other specimen. Can we be satisfied of that?

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A I would have assumed from the other numerals, the other letters that it is a reasonable thing to assume.

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Q All right. Well, perhaps I can make a note specifically to cover that ground with Dr. Ellis. I take it that in the interpretation of these figures and symbols you would bow to his evidence, would you?

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A Yes, I would.

MR. LAMEK: Again, Mr. Commissioner, by all means let's take it up with Dr. Ellis, but his own digoxin book, which I put to Dr. Rowe in chief at page 31 of Exhibit 45 from the preliminary hearing identifies Sample JO5480, this sample as being IV fluid.



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THE COMMISSIONER: Well, that's why -
I don't want to interrupt your cross-examination,
Mr. Tobias, but surely the sample has to be the same,
doesn't it. If it is a sample, doesn't it all have
to be either all or none of it being the IV fluid?

MR. TOBIAS: Yes, I would think so.

THE COMMISSIONER: So, the fact that
they didn't put it there, you know, obviously this
computer got tired of putting in notes. If it had
done it properly would have said "see K" or something and
K would have said IV, but that's all. But by all
means ask. I don't see how it could be anything else
because it is a sample, and it has to be - unless
the other three are wrong, it has to be IV fluid too,
does it not?

MR. TOBIAS: All right, I think that
is probably a reasonable explanation. I think in any
event in light of Mr. Lamek's comment I am satisfied
that it was IV fluid because, as I understand it,
Mr. Lamek, that comment relates to Dr. Ellis' workbook
itself which I would think would be the more reliable
document in any event.

Q Now, as I understand it, Doctor,
when a sample is drawn there is an order written by
the physician requesting certain tests on that sample,
is there not?



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A. Yes.

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Q All right. So, the order for a dig. reading would appear on one of the doctors' order sheets?

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A. It should do.

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Q All right. And would it also appear on the requisition form that was in use by the laboratory at that time?

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A. Yes.

Q Now, unfortunately in this chart the various requisition forms are not produced, but I must admit that I did look through the order sheets to see if there was a dig. level asked for on November 21st and it would appear that no such sample was ever asked for. Is that your understanding as well that dig. tests were not run on the 21st?

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Q. Indeed you pointed out to me before that the March 21st specimen is urine and not blood, so one would not expect a dig. level to be asked for, or requested on that particular sample, is that correct?

A. Yes.

Q. Now with respect to the next sample, the one which is indicated: "No time of collection", on March 22nd, 1981, when can we assume that that particular dig. level was ordered?

A. I don't know.

Q. It is not safe to assume, however, I would take it, that because the samples were taken at various times that the orders were also written at those times, am I correct?

A. The orders were written at that time?

Q. No, what I am saying is it is not necessarily safe to assume that if a sample were drawn at 4:30 that the order for a dig. reading was also made at 4:30, it could have been made later?

A. Yes.

Q. And in fact it could have been made at any time up until that particular specimen is assayed, is that not correct?



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A. It would have to be received
with the requisition I would think.

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Q. What I am saying is this. If
a sample is drawn at 4:30 a.m. on March 22nd, and
at that particular time there is no request for a
dig. reading, that doesn't mean that that request
for a dig reading cannot be made at some later time,
indeed at any time up until the assay is performed
and the specimen is used?

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A. Yes, that is correct.

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Q. Wouldn't you agree with me,
Doctor, that since Justin Cook was not prescribed
digoxin, it would be highly unusual for anyone to
request a dig. level on him prior to the terminal
events?

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A. Yes.

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Q. But it is not unusual I take
it that perhaps dig. levels were requested after the
terminal events, because at that time there was some
suspicion in the Cardiology Department regarding the
relationship of digoxin toxicity to these epidemic
tests?

A. Yes.

Q. Is that also correct?

A. Yes.



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Q. Now if we wanted to satisfy ourselves with respect to a particular specimen number, as to who requested the digitalis assay, what document would we look at, would it be the requisition form that Dr. Ellis keeps, and would it be the order sheet written by the physician?

A. I am not sure, but I would look at both.

Q. I'm sorry, I didn't catch that.

A. I would look for both I think.

Q. So that it could be either of the order sheet or on the requisition form, either source might give us a clue as to the identity of the person requesting the reading?

A. Yes.

Q. Now with respect to the case of Justin Cook in particular, do you know who requested the digoxin assays that were run apparently some time before 1402 hours on March 23rd, 1981?

A. No, I don't.

Q. Have you made any enquiries to find out who that person is?

A. Well, I think that Dr. Fowler who was the cardiologist on duty and would have been there at the time of the episode would be the



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one to ask that question of. I have asked him, I have tried to find out who ordered it but it is a little unclear to me.

Q. Can you recall any specific discussions between you and Dr. Fowler as to whether or not it was Dr. Fowler who requested the dig readings?

A. Yes.

Q. And is it your recollection that he in fact was the one who requisitioned them?

A. No, I am not sure that he remembers for sure whether he did, or whether it was someone else.

Q. So when you say it might have been someone else, you again are relying on something that was told to you by Dr. Fowler?

A. Yes.

THE COMMISSIONER: I think there is nothing in this medical record.

MR. TOBIAS: No, I have looked at the order sheets, Mr. Commissioner, and I must confess that I couldn't find the answer to my question by reference to those documents.

Q. In any event, Doctor, I would take it again that the person to ask specifically regarding who requested the dig readings on particular



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samples would be Dr. Ellis, he would be in the best position to tell us, would he not?

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A. I am not sure. I think he would be in one position to tell you whether he has got that information, but I don't know whether in every single instance he would know specifically who the physician was.

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Q. All right, that's fair. With respect to the particular case of Justin Cook, I think it is fair to say, Doctor, is it not, that certainly this is the case that you are the most concerned about and it gives you the most trouble?

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A. Yes.

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Q. With respect to the question of digoxin toxicity?

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A. Yes.

Q. I would think that that concern was brought to bear and was raised in your own mind fairly shortly after the terminal events, is that a fair statement?

A. The terminal events were looked after by Dr. Fowler and Dr. Teperman.

Q. Yes.

A. And so I assume that would have had its origins in whatever they decided together.



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3 Q. My suggestion is this. It would
4 appear from the medical record on page 57 that the
5 results of the assays were available at or some time
6 shortly after 14.02 hours on March 23rd, 1981?

6 A. Yes.

7 Q. And I must assume that those
8 results would have been in some way communicated to
9 you at approximately the same time that Dr. Fowler
10 received them?

10 A. Yes.

11 Q. I find it somewhat curious
12 that at that particular time, given the concern that
13 you had about this case, that you did not specifically
14 make efforts yourself to find out who had requested
15 the digoxin readings. Do you have an explanation
16 for that?

17 A. I don't have a problem with
18 that, because it was in the hands of the coroner at
19 that time.

19 Q. But surely you must have been
20 concerned out of your own curiosity as Chief of
21 Cardiology?

22 A. Yes, but you know at that
23 stage it was a major investigation, it was in the
24 hands of the coroner and the police.
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Q. Was it your view at the time that because of the coroner's investigation your own investigative efforts had to cease?

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A. Yes.

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Q. I am sorry?

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A. Yes.

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Q. Why were you under that

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impression?

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A. Well, because I think it was

a police investigation at that point.

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Q. Is it fair to say then that

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given that view that it was a police investigation

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and that they would get the answers, you were

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prepared to wait for their answers to satisfy your

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own natural curiosity?

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A. Well, I was just as anxious

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as everybody else, but that is true. Our position

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on the issue once the police were involved in this

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was that we were there to assist them in the

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investigation, and we were not about to start an

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investigation of our own in the sense of trying to

find out what the explanations were.

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Q. Okay, thank you, Doctor. Now

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there is the notation on page 77 of the medical

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record of Justin Cook.

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THE COMMISSIONER: Is that the right page? It is very faint on my copy.

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MR. TOBIAS: I'm sorry, Mr. Commissioner, it is not page 77 of the chart, but if you give me a moment, perhaps I can find the correct reference.

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Q. Perhaps I can ask this question while I am looking for the particular reference, Doctor. I had noted in my review of the chart and I am quoting directly, a notation that a cine angiogram of the kidneys shows a normal right collecting system, the left appears slightly enlarged suggesting mild hydronephrosis. First of all, can you tell me what an angiogram of the kidneys is, what kind of test is that, and why is it done?

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A. May I just know the page number again?

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Q. I am sorry, I am looking for that reference as I ask you the question.

A. This is page 72 you say?

Q. Indeed it does appear to be 72 and I am having difficulty as usual reading my own writing. Page 72, the line just above "summary" is what I am referring to. Can you tell me what an angiogram of the kidneys is and why that test is



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routinely done?

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A. Well, this test is done as

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a part of the test which is listed under "part

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examined selective angiocardioqram" on the top, the

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fourth line down on the left hand side.

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Q. Yes.

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A. And that is part of the study

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done during cardiac catheterization of the heart,

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where material that is radiopaque, contrast materials
injected inside the heart in such specific areas to

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outline the anatomy. That material is excreted from

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the body after the test through the kidneys, and it

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shows up the outline of the collecting system of the

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kidneys and the bladder. So since there is a signifi-
cant association between abnormalities of the

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genito-urinary tract in congenital heart disease,

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we usually scan that area after the angiocardioqram

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has been performed, a few minutes, or 10 or 15 minutes

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later in order to see if we can get any indication

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that there is anything wrong with the kidneys in the

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collecting system of that particular child. It is

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not done because we necessarily suspect that in this

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particular child, but it is done in all children who

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have selective angiocardioqramms.

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Q. And in effect then it is a

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test then to help you determine kidney function, is that correct?

A. It may do that, but it is more usually to see if there is any anatomical abnormality of the collecting system of the kidneys.

Q. And you say that is done as a fairly routine measure, not necessarily because you suspect kidney problems?

A. It is because of the association of anatomical abnormalities of the collecting system in children with congenital heart disease, about somewhere around 10 per cent, 5 per cent to 10 per cent.

Q. With respect to Justin Cook it would appear, from my reading of the medical record, that the notation: "normal rate collecting system" means there was no problem with respect to the right kidney in terms of its anatomical structure and ability to collect and extract material, is that a fair statement?

A. Yes.

Q. Can you tell me what the last two words are: "mild hydronephrosis", can you tell me what that term means?

A. That means that the



collecting system appears to be a little dilated on the left side.

Q. And ordinarily does that interfere with the function of the left side and the ability to excrete?

A. Not unless it is very gross.

Q. In this case it is not gross, but mild.

A. Well, in this method of examination all that can be done is to raise questions, and if that sort of thing is found, if there isn't an obvious explanation for it it might be because of the position of the child, or kinking from the position on the table or something like that. Then the radiologist would normally recommend to us that a separate specific study of that area be made.

Q. Now in this case, to your knowledge, was a separate specific study of that area ever conducted?

A. I don't think so, because the study was done on the Saturday I think and the patient died on the Sunday.

Q. With respect to the balance of this medical record, and your own recollection of reviewing it, is there anything in the medical record



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which would indicate to you specifically a problem with renal or pre-renal failure in Justin Cook?

A. No, I don't think so.

Q. With respect to the autopsy report, was a full autopsy done on Justin Cook, or was it confined just to the heart and lungs?

A. I think he had a partial autopsy at the Hospital for Sick Children.

Q. Was there anything in the autopsy report that would give you any concern regarding renal function?

A. Well, we wouldn't have seen it because it just applies to the heart and the lungs.

Q. I am sorry?

A. The partial autopsy just applied to the heart and the lungs.

Q. Now with respect to the action of the drug digoxin, would you expect that a higher level, and I suppose I should define that, let's say a level of approximately 70 nanograms per millilitre?

A. This is digoxin?

Q. Digoxin.

A. Yes.

Q. Say that level, would you



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expect that an infant of under three months of age would be able to maintain a blood level that high for any sustained period of time?

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A. No.

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Q. So you would assume, I take it, that with the blood level that high there would, in a fairly short period of time, be disturbances of the heart rhythm and the heart action?

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A. I would have expected so.

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Q. Would you expect those disturbances to be of such consequence that they would be fatal?

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A. Yes.

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Q. Now, with respect to many of the infants that we had been reviewing, and I am including Justin Cook in this comment, I take it that you are satisfied that the onset of terminal events themselves was sudden and were rapid in the progression, is that a fair statement?

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A. Yes.

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Q. Do you feel that is a fair statement with respect to Justin Cook?

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A. Yes.

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Q. Would you agree then with the statement that Justin Cook succumbed to digoxin



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intoxication, that it would be fair to assume that the dose was given shortly before the onset of terminal events, and something rather larger than what a therapeutic dose would be, would you agree with that statement?

A. Yes, I think I would.

Q. Now, I understand that there are numerous methods of administration of the drug, orally, in IV solution and intramuscular?

A. Yes.

Q. First of all I would like to talk about the oral method. With respect to a level again of approximately 70 nanograms per millilitre, one would expect that in order to produce that through a single dose, rather than a slow poisoning over time, one would expect that one would have to administer a fairly sizeable number of pills, is that not correct?

A. In order to produce that dose?

Q. Let me repeat the question.

We are talking about a blood level in the range of 70 nanograms, we are assuming that it wasn't given over a long period of time but it was given in a fairly sudden and quick single overdose in order to use the oral route one would be presented with the



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difficulty that the infant would have to ingest a considerable amount of pills, would he not?

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A. Yes.

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Q. And without the help of a nasal gastric tube that would make administration quite difficult, would it not?

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A. Yes.

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Q. Also I understand that there are problems, and correct me if I am wrong, with respect to the administration directly into the heart muscle, the intramuscular administration, is that correct?

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A. I don't know, it is given into heart muscle, you mean into a muscle in the thigh or the shoulder?

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Q. Let's not use the heart muscle as the example, let's use the thigh muscle.

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A. Yes.

Q. Would there not be some specific problems, especially with an infant, in administering the drug that way?

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A. Yes, there would.

Q. Can you highlight what some of those problems might be?

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A. Well, you can give it into



D16

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3 the muscle, but it is painful.
4 Q. And would cause a decided
5 pain response?
6 A. Yes, I would think so.
7 Q. And a lot of movement?
8 A. Yes.
9 Q. And you might even get, in
10 some cases, breakage of the needle, is that a
11 possibility?
12 A. I don't know about that, but
13 you would certainly get a lot of response from the
14 patient.
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Q. Now, again, assuming that we have a level of approximately 70 nanograms per millilitre in terms of the digoxin reading and assuming again that that dosage or rather that the drug is administered a short time before the on-set of terminal events, would you expect that if it were going to be given by the IV method, administration into the bag or into the tubing itself?

A. If it were given by the IV method?

Q. Yes.

A. You know, my guess would be it would be into the tubing itself.

Q. Now, help me think this out, Doctor, if you will. If it were given into the IV bag itself, then the onset of terminal events would bear some relationship, would it not, to the drip rate of the solution?

A. Yes, it would.

Q. And it certainly would not indicate a massive entry of the drug into the blood system all at one time, would it?

A. I would see that as unlikely, yes.

Q. So again, if it were given in the IV bag, one would expect a somewhat more gradual



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and less sudden onset of terminal events?

A. I think so, but you know, I have already said I am not really an expert in the pharmacology side.

Q. I take from all of the answers that you have given, and particularly the last two or three answers, then, that if we saw a very sudden onset of terminal events and if we saw levels of 70 nanograms per millilitre, that it would be fair to assume that that might be the result of a massive overdose given by IV bolus or into the tubing itself; is that correct?

A. Yes, I think so.

Q. Is that a fair assumption?

A. That would be my assumption.

Q. Now, the IV tubing itself, are they in any way self-sealing, to your knowledge?

A. Yes, they are.

Q. Can you explain to me in lay terms --

A. At least I think so.

Q. -- how that works? How does it seal itself?

A. Well, the needle is relatively small.



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Q. Yes?

A. And the material just closes over. There may be a drop or something like that that comes out, but it is not as though you are cutting a great hole in the tube.

Q. Exactly. So that it would be very difficult to detect after the fact, would it not, whether the tubing had been punctured?

A. I would think so. I do not know for sure.

Q. We have also been told, and I believe in fact that it was a fact established by the prima facie statement of facts which has been put in as an Exhibit, that nurses were not allowed to administer digoxin via the IV method; is that not so?

A. That is correct.

Q. Now, is that correct both with respect to an administration into the IV tubing and into the IV bag?

A. Yes, I think any digoxin had to be -- my understanding was any digoxin given intravenously had to be done by the physician.

Q. So it is broader than I stated it, is it not, that in fact any digoxin given by any of the methods that I have canvassed would have to be



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given by a doctor?

A. Except the naso gastric tube.

THE COMMISSIONER: That is not what you said. I thought you said it was only IV?

THE WITNESS: Yes. No, I said not the naso gastric tube. If somebody wanted to give oral digoxin, nurses are able to give that.

MR. TOBIAS: Q. Nurses were allowed to give that. So the restriction only applied with respect to the administration by the IV method?

A. Yes, I believe so.

Q. Fine. Now, perhaps you can help me with this. Are there a set of circumstances, conditions, symptoms, call them what you like, wherein you would expect, as a physician, that a proper therapeutic dose of digoxin should be given and perhaps is required to be given via the IV bolus or the tubing as opposed to a slow infusion by bag? Are there circumstances that you can contemplate where that would be a proper or a required or a desired administration?

A. To give digoxin?

Q. Yes.

A. You mean in a bolus?

Q. In bolus, yes?



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A. I understand that is what is
done all the time.

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Q. All right. As an ordinary course?

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A. Yes.

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A. Yes.

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Q. Now, do you know why that route
of administration was preferred over perhaps injecting
it into the IV bag?

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A. Well, it just makes sure that it
all gets in and the difficulty, if you put it in an
IV bag is that it is spread out over a very long
period of time and the distribution phase would be
much longer.

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Q. Are you saying, then, that with
respect to therapeutic doses it is indeed desirable
for that to be ingested into the system in a fairly
rapid manner?

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A. Yes.

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Q. They want to deliver the drug
to the system, I understand, as soon as possible?



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A. Reasonably, yes.

Q. And the fastest method possible is by going the route of the IV bolus?

A. Yes, and there are all sorts of other problems that can happen if you put it in the IV solution, and that is that the IV may plug, that is it may clot and many of these were scalp vein infusions with very small needles. So you do not want to have the dose that you calculated for the patient over the next 12 hours to be half-way in or a third of the way in or something like that. You do not really know how much is in if that happens to the intravenous system.

MR. TOBIAS: Mr. Commissioner, shall I continue or is this an appropriate time to take the morning break? Perhaps it is a bit early.

THE COMMISSIONER: I cannot see the time. What time is it?

MR. TOBIAS: It is exactly 11:00 a.m.

THE COMMISSIONER: Well, we usually go on until 11:30, so unless you want to break for any reason?

MR. TOBIAS: No, I am prepared to continue.

Q. Now, again referring to page 57



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of the medical record of Justin Cook, we have already had some discussion this morning regarding sample no. J05480.

THE COMMISSIONER: Mr. Tobias, something is troubling me and I want to discuss it with you.

Your clients are the parents of Jordan Hines?

MR. TOBIAS: That is correct.

THE COMMISSIONER: Is this relevant to that question of the cause of death of Jordan Hines?

MR. TOBIAS: I would feel, Mr. Commissioner, that the course of the terminal events with respect to all 36 deaths are relevant in that they may cast light.

THE COMMISSIONER: Remotely relevant, but is it really relevant? I do not mind your going off on other babies if you can connect it with the Hines baby, but surely the Hines baby is what you should be concentrating on. That is your client. Your clients are Mr. and Mrs. Hines, and their concern is to discover what happened to their baby.

MR. TOBIAS: Yes, but to the extent that they can only discover what happened to their



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baby by trying to recognize a general pattern ---

THE COMMISSIONER: Well, I am not sure that that is so. You must understand that if every Counsel for every parent were to ask about all 36 babies, you can imagine how long we would be here.

MR. TOBIAS: I can well contemplate that horrendous problems that that would lead to.

THE COMMISSIONER: I just want to tell you that that is a concern of mine, and if you are going to concentrate on the Cook baby, then I do not -- do you intend to come to the Hines baby at some point?

MR. TOBIAS: I do intend to deal with the Hines baby.

THE COMMISSIONER: Do you intend to deal with any other babies besides?

MR. TOBIAS: I do intend to deal with four other children other than the Hines baby. I might say only those --

THE COMMISSIONER: Well, I have some serious concern.

MR. TOBIAS: -- only those children where I feel the relevance of their course will be high in relation to the light that it may cast upon what happened to the Hines baby.

THE COMMISSIONER: Well, I will let



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3 you go. I just want to tell you now that I have this
4 concern.

5 MR. TOBIAS: Yes, I appreciate that
6 concern, sir, and I intend to be somewhat briefer
7 with respect to the other four children other than
8 Hines that I intend to deal with.

9 Yes, Mr. Scott?

10 MR. SCOTT: Mr. Commissioner, I know
11 that reluctance of the Commission to make restrictive
12 rulings and I understand that, but the time may come
13 when a ruling has to be made. Dr. Rowe is the first
14 of a number of cardiologists that may in the end
15 amount to six or seven or eight, and it seems to me
16 if my friend examines about other babies now, it is
17 going to be very difficult to say that he cannot
18 examine later or that others cannot examine later.

19 THE COMMISSIONER: Well, I would not
20 find it difficult to reverse myself at any time,
21 Mr. Scott, I can assure you of that.

22 I wanted to tell Mr. Tobias what my
23 concern was. The difficulty is I want to let him go
24 on if he claims that the circumstances of the Cook
25 baby are such that they will assist him in determining
the cause of death of the Hines baby. If it is just
remotely relevant, he will not be allowed to go --



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3 MR. SCOTT: So you are letting him
4 have sort of a trial run to see if he can make a
5 connection?

6 THE COMMISSIONER: A trial run to see
7 what the connection is.

8 MR. SCOTT: And after he has conducted
9 this exercise, we can then be heard about whether ---

10 THE COMMISSIONER: You can indeed.

11 MR. SCOTT: He is not going to be
12 allowed a trial run each time?

13 THE COMMISSIONER: No, I assure you
14 of that.

15 MR. SCOTT: Well, you will let us
16 know, sir, when we can make submissions about this?

17 THE COMMISSIONER: Well, I suspect
18 that you will make the submissions in any event,
19 Mr. Scott, but I will probably get at it before you
20 do, but if I do not, you will remind me.

21 MR. SCOTT: Well, I would, but as we
22 do not get any rulings, I do not want to be tiresome.

23 THE COMMISSIONER: Well, I have
24 indicated that perhaps there will be a ruling in this
25 case if I cannot see the relevance, the immediate
relevance, Mr. Tobias. It is not just the remote
relevance. Of course, there is some association



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3 because there were 36 children who died in circum-
4 stances that might conceivably mean that they all died
5 in the same manner, conceivably. Therefore, there is
6 that relevance. But you can see as well as I can that
7 we cannot possibly -- when you represent one child,
8 in terms of one child, we cannot allow you to go
9 through them all. I have a certain doubt as to
10 whether you can go through even the other children
11 unless there is an immediate reference.

12 For instance, if you were to say that
13 the Hines child died at this precise time in this
14 precise manner, and some other child died in some
15 other -- why do you say that that child suffered
16 from digoxin poisoning whereas the Hines child did not,
17 that sort of questioning, of course, is relevant as
18 long as you can link it up. If you cannot link it up ---

19 MR. TOBIAS: But the link may be
20 impossible to establish unless inquiries are made
21 regarding the circumstances and the onset of
22 terminal events with respect to these other children.
23 I might point out that I am well aware of the
24 problem and I can appreciate your concern. However,
25 the witness himself has defined what I consider to
be the six or seven most suspicious cases or those
that cause him the most concern, and I think it is



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2 relevant to note that of those six or seven, there
3 are at least three or four whose parents are not
4 represented by Counsel before this Commission.

5 THE COMMISSIONER: They are being
6 represented by Commission Counsel, who is concerned,
7 and many of the other parties are concerned about
8 the deaths of all of them.

9 MR. TOBIAS: I recognize that, sir,
10 as well.

11 THE COMMISSIONER: You are concerned
12 with the Hines child and I would like to have you
13 concentrate on that, and I think your clients would
14 too. However, I am going to look to see what you
15 said about your -- your child was one of the six.

16 MR. TOBIAS: That is correct, sir.

17 THE COMMISSIONER: That Dr. Rowe said
18 might be as a result of digoxin poisoning?

19 MR. TOBIAS: Well, he indicated that
20 he was one of the six that he had some concern over,
21 that is true.

22 THE COMMISSIONER: That is right.

23 MR. TOBIAS: May I continue?

24 THE COMMISSIONER: Yes, by all means.

25 MR. TOBIAS: Q. Thank you. We were
discussing, Dr. Rowe, sample no. J05480, taken on the



1
2 22nd of March at 7:00 a.m. Now, I think we have
3 established in prior evidence that the specimen
4 with which we are concerned in this particular case
5 is the IV fluid; is that not so?

6 A. I think so.

7 Q. Obviously, the IV fluid that
8 was found in the IV bag of Justin Cook, the indication
9 of the assay, the result of the assay, rather,
10 indicates that that IV bag or the IV fluid, rather, was
11 negative for digoxin and you said in your Examination-
12 in-Chief, correct me if I am wrong, that there was
13 some concern about the origin of the specimen but that
14 you were satisfied if the source was confirmed that
15 would allow you to rule out the possible administration
-- or sorry, I am confused.

16 I believe your evidence was that there
17 was some concern about the origin of the specimen but
18 that if that problem was negated, if the source of
19 the sample was confirmed for you, then you were
20 prepared to accept the assay result of less than .2
nanograms; am I summarizing your evidence fairly?

21 A. I cannot remember whether I was
22 referring to that or the blood sample.

23 Q. I am sorry, Doctor, I am having
24 difficulty hearing you.
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3 A. I am not quite sure that I
4 remember with those particular words whether I was
5 referring to the blood sample or to the intravenous
6 sample.

7 Q. All right. Well, perhaps you
8 can assist me in this way. Taking at face value the
9 reading of less than .2 nanograms per millilitre and
10 accepting that, subject to whatever concerns you may
11 have had regarding the source, is it fair to say
12 that if that reading is accurate that would tend to
13 speak against the possibility of digoxin having been
14 administered to Justin Cook through the IV bag,
15 through the IV fluid itself?

16 A. The bag -- it depends where the
17 sample was taken. You see, I do not see here
18 whether it was taken from the bag of fluid or whether
19 it was taken from the terminal part of the intravenous
20 or what. It would depend, it seems to me, on where --

21 Q. All right, I think that is a
22 fair comment. If it were confirmed for you that the
23 source indeed was the fluid in the bag, would that
24 in your view speak against the administration of the
25 drug to Justin Cook via the IV bag?

A. From the bag, yes.

Q. All right, fine. Now, is there



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any indication in the chart, that you are aware of,
as to who took this sample?

A. No, I am not aware of anybody.

Q. I suppose that we would have to
check the order sheets and the requisition forms, and
that is something that perhaps we should be asking
Dr. Ellis; is that correct?

A. I believe so.

Q. Now, in the ordinary course, is
this something that you see very often, assays for
drugs run on IV fluid?

A. No.

Q. So I take it that that is an
uncommon or out of the ordinary occurrence?

A. Yes.

Q. Can you assist me why in the
particular case of Justin Cook there was a digoxin
assay run on the IV fluid?

A. No, I do not know the reason
for that. I have assumed that it was probably the
police who decided that.

Q. Do you recall any discussions
with any other cardiologist or cardiology fellows at
or near the time of these events regarding the
significance of asking for the digoxin assay on the



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2 fluid?

3 A. No, I do not think I do. In fact,
4 I do not think I knew that had been done.

5 Q. So you have no independent
6 recollection of such discussions?

7 A. No.

8 Q. Do you have any independent
9 recollection, Doctor, of when you became aware that
10 the fluid was assayed?

11 A. I do not remember. You know,
12 it is possible that on the Sunday that that may have
13 come up in discussions with the police, but I do not
14 recall specifically.

15 Q. Well, I would think from your
16 previous answers that you would agree, Doctor, that
17 the result of the assay on the IV fluid would be a
18 very significant result, especially if we did confirm
19 the source of the specimen, that is, the bag or the
20 bolus; would you agree with that statement that that
21 would be a very significant piece of information?

22 A. I do not know. I think there are
23 lots of issues that come into that question and I
24 think the pharmacologists would be the ones who could
25 indicate to you. It would depend if anything had
flushed through the system, a whole lot of factors



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2 that might come into it that would have to be
3 answered, and it would depend a lot on what was done
4 and so on.

5 Q. But you did indicate earlier,
6 did you not, in responding to questions that I put to
7 you, you did indicate that in a situation very similar
8 to Justin Cook's, where you had readings of
9 approximately 70 nanograms per millilitre, where the
10 onset of terminal events was very rapid, where you
11 might very well expect ingestion by the IV method,
12 you did indicate in all of those that there would be
13 some concern certainly with the IV method of
administration?

14 A. Yes.

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Q Against that background, would you not think that that particular piece of information as to the results of a digoxin assay on the IV fluid would be most significant?

A I'm not sure because I think, again, as I have said before, that the pharmacologists have views about how long the stuff sticks to the tubing and all that sort of thing and flushing and so on. So, I wouldn't really be competent to say. That would be my natural reaction, yes, that that is probably so, but I do not know that I can really answer that ---

Q And if those questions were raised ---

MR. ORTVED: Just a minute, let him finish his answer.

MR. TOBIAS: I'm sorry, Doctor, go ahead.

THE WITNESS: You know, the experts are much more likely to give you a better answer on this than I am because I am a sort of an informed physician but not an expert in the digoxin clearance out of the IV tubes.

MR. TOBIAS: Q All right. And if those questions were raised in your mind, the questions



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2 of possible digoxin intoxication and if you turned
3 your mind to the question of possible administration
4 and in light of what you have told me about the
5 suspected use, or the reasonableness of suspecting
6 the IV administration given the onset of terminal
7 events, then I take it if all of those things had of
8 occurred to you, you would have been surprised when
9 you did learn of the results of the digoxin assay on
the fluid, is that correct?

10 A. If it had just been a bag I
11 perhaps wouldn't have been.

12 Q. All right. Now, if we can turn,
13 Doctor, to the medical record of Jordan Hines, which
14 was Exhibit 103, and as well if you can direct your
15 attention to what was Exhibit 103A, which was the
16 final autopsy report on Jordan Hines.

17 I am referring you, with respect, to
18 the medical record of Jordan Hines, specifically to
19 what would appear to be page 28, which is the
preliminary autopsy report.

20 Doctor, I think it was established in
21 your evidence in chief that comparing these two
22 documents, that is, the final autopsy report and the
23 preliminary autopsy report, indeed, they appear to be
24 identical in content and the only thing that differs
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2 is the fact that on Exhibit 103A the word "final"
3 is added rather than the word "preliminary" autopsy
4 report. Is that correct, to your understanding?

5 A. Yes, I think so.

6 Q Is that in any way indicative
7 in your mind as to whether or not a final autopsy
8 report was actually done? Let's not use the term
9 "final autopsy report", because that in itself is a
10 defined term, is it not indicative of the fact that
11 no further autopsy or postmortem pathological studies
12 were done after the preparation of the preliminary
autopsy report?

13 A. I would think that's correct.

14 Q All right. Now, do you know
15 why that is correct, do you know why nothing further
16 was done and no further reports were made by
pathology?

17 A. No, I don't know.

18 Q All right. Would you think that
19 it would be fair to assume, Doctor, that part of the
20 reason might be the intervention at some stage after
21 the preparation of the preliminary report of the
22 police and the police investigation and the coroner's
23 investigation? Would those events perhaps tend to
24 terminate the ongoing pathological inquiries with
25 respect to Jordan Hines?



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A. I suppose that's possible.

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Q. All right.

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A. I don't know the exact way in which that operates.

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Q. All right. I take it that you don't have any specific information whether that in fact was one of the reasons or the reason why a final autopsy report wasn't prepared in Jordan Hines' case?

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MR. ORTVED: Why a final wasn't?

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MR. TOBIAS: Yes.

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Q. I take it that you have no specific information as to whether or not the police investigation was one of the reasons or the reason?

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MR. ORTVED: Except that we do have what is identified as the final autopsy report, so, I don't quarrel with Mr. Tobias' question, just his use of the term "final".

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MR. TOBIAS: Q. All right, perhaps I can rephrase it. Do you have any information which would indicate whether the intervening coroner's and police investigation was the reason that apparently further postmortem/pathological studies were not done on Jordan Hines?

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A. I think if this is the patient that Dr. Vera Rose was involved with?

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Q. Yes, this was the case that Dr. Vera Rose was involved with.

A. Yes. I think that she did endeavour to get more information about the histology and it takes some time for that information to be accumulated and then she understood that this information had been handed to the police.

Q. All right. And at that stage would you expect that all further inquiries by pathology would stop?

A. Well, I think that certainly the thing would be closed off in a different direction, yes.

Q. Fine. Now, with respect to the preliminary autopsy report itself, there is an indication, and I am referring to page 28 of the medical record of Jordan Hines and I am referring to the second last line:

"However, this does not explain the arrhythmias and further conclusions will have to await examination of the conducting system."

I take it that that was one of the things that still had to be done after the making of the preliminary autopsy report. One of the things still to be undertaken was the investigation of the



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conducting system, is that not correct?

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A. I don't know whether that was -

that's how it reads but I don't, as I have said

before, an examination of their conducting system is

something that is a nine-month job. It is a

tremendously difficult task which is really done by

people, a few people who specialize in that area.

Q. In fact, however, not only is

that how that particular line reads, but did you not

tell us that you did have certain discussions with

Dr. Rose? Do you recall having discussions with

Dr. Rose regarding the death of Jordan Hines?

A. Yes.

Q. And do you recall that one of

the things that she was concerned about was the viral

infection affecting the heart muscle?

A. Yes.

Q. And do you recall telling us in

your examination in chief that she was not prepared

to rule out that possibility until studies were done

of the conducting system?

A. I think until she had had

histology of the heart muscle.

Q. Okay, some histology of the heart

muscle. Did you not indicate in your direct evidence



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2 that she was not prepared to rule out that possibility
3 until the final report was in - I think those were
4 the terms used?

5 A. Yes, I believe she wanted to
6 get information about the histology and she tired to
7 get it but there were delays in getting it.

8 Q. All right. So that both from
9 its reading, and I'm referring now to page 28 of
10 Exhibit 103, both with respect to its obvious reading
11 and with respect to the information that you managed
12 to gather from Dr. Vera Rose, you knew in any event
13 that the full investigation of the circumstances
14 of Jordan Hines death had not been completed and
15 there were further tests which were to be forthcoming.
16 You were aware of that, were you not?

17 A. Well, I was aware that there was
18 histology awaited but I don't think I was aware that
19 anybody had suggested the conducting system.

20 Q. All right. Now, that was my
21 next question, actually. At the time, was there any
22 discussion between you and Dr. Vera Rose specifically
23 as it related to the conducting system, was the
24 possibility of that discussed?

25 A. No, that was discussed even as
far back as the hospital from which he was referred.



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Q All right.

A And the conducting system was a question there, but I think she felt the more likely possibility was a viral infection of the heart muscle.

Q All right. Now, the preliminary autopsy report itself raises the question of Sudden Infant Death Syndrome. So, that is one theory. Am I correct?

A Yes.

Q Another theory was Dr. Rose's theory of the viral infection affecting the heart muscle?

A Yes.

Q And the third possibility was some problem with the conducting system. Are there any other theories or explanations for this death that were considered or that you were aware of?

A Well, there had been a suggestion by the referring cardiologist that there might be a cardiac tumour.

Q All right. But in any event, that was ruled out on the preliminary autopsy report, was it not?

A Yes; at least I think so.

Q All right. And other than that



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2 other possibility that you have just raised of a
3 cardiac tumour, were there any other theories or
4 possible explanations that were raised or considered
5 that you were aware of?

6 A. I think there was a question as
7 to whether it might have been pneumonia.

8 Q. All right, fine. Indeed, the
9 Hines baby was being treated with gentamycin and
10 ampicillin which are antibiotics, is that not correct?

11 A. Yes.

12 Q. And those would be the drugs
13 that would normally be administered in the treatment
14 of pneumonia in an infant of this age, is that not
15 also correct?

16 A. Yes.

17 Q. All right. Now, other than what
18 you have already told me this morning, are there any
19 other theories that you are aware of that were
20 considered and put forward?

21 A. I think that encompasses the ones
22 that I understood had been raised.

23 Q. All right. Now, can we agree
24 that the preliminary autopsy report ruled out the
25 pneumonia as the cause and ruled out the heart tumour
as the cause so that those theories were adequately
explained away by the preliminary autopsy report?



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A. Yes.

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Q. All right. To your knowledge, was Dr. Rose's theory of the viral infection affecting the heart muscle ever ruled out?

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A. I'm not sure about that. I think maybe in the more detailed information on that it was but there is no mention of it under the pathological diagnosis, let's put it that way.

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Q. All right, fine. I believe in chief under questioning from Mr. Lamek you did indicate, did you not, that Dr. Rose, Dr. Vera Rose initially felt that she would report the situation to the coroner after she got the autopsy results because she felt it was reasonable to wait for that information in order to test her theory of viral infection. Do you recall giving that evidence?

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MR. SCOTT: Can we have the volume and page, please?

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MR. TOBIAS: Yes, Dr. Rowe, Volume 17, page 2872.

Now, the question was:

"Do you recall giving the evidence that Dr. Rose decided to wait until she saw what was revealed on the histology."

A. Yes.



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Q And you do also recall commenting in your evidence in chief that one of the things that she was awaiting was the microscopic information on the autopsy and I believe you said, did you not, that that information was some time in coming?

A Yes, she didn't see that for a long, long time.

Q All right. And you also testified that Dr. Rose had indicated that she had attempted to find out the results several times but that it was not apparently completed during the time that she requested the information and you weren't sure exactly when that information became available to her, you thought that it perhaps might have been considerably later?

A It was very much later I believe.

Q All right. But you were under the impression were you not that ultimately that microscopic information was made available to her?

A It was made available to her by the police, I believe.

Q All right. And at that point did that rule out to your knowledge her theory of a viral infection affecting the heart muscle?

A I am not absolutely sure, but I think it probably did.



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Q And I take it that obviously
Dr. Rose would be the one to question in that regard,
is that correct?

A. Yes.

Q All right. Now, with respect
to the microscopic study that we have been referring
to, can you tell us briefly what would be involved
in conducting such a study?

A. You are relating to the study
to examine whether there is viral myocarditis or
inflammation of the muscle.

Q Well, in general, a microscopic
study, I understand that it can also be used to test
the theory of a deficiency in the conducting system.
Is that not correct?

A. It can, but as I think I have
said, that is a very highly specialized ---

Q Form of microscopic testing?

A. Yes.

Q All right, let's deal with that
if we can for a moment, Doctor. Perhaps, Mr.
Commissioner, this might be an appropriate time to
take the morning break.

THE COMMISSIONER: All right, 20 minutes.

--- Short recess.

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---Upon resuming.

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THE COMMISSIONER: Yes, all right,

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Mr. Tobias.

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MR. TOBIAS: Q. Dr. Rowe, just

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prior to the break we were discussing microscopic

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studies. Perhaps I can clear up one point that is

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causing me some confusion. You seemed to be referring

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before the break to microscopic studies that

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Dr. Rose was awaiting in order to satisfy herself

11

regarding the theory of viral infection affecting

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the heart muscle. You also referred to microscopic
studies done in order to examine the conducting system.

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Do I understand that those are two separate and

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different kinds of studies?

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A. They are similar and related

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but they are quite different in the extent of the

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work that is involved and the type of sectioning

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that has to be done.

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Q. I take it the study, the

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microscopic study that is used to determine any

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dysfunction of the conducting system, is the more

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extensive of the two, the more time consuming of the
two?

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A. Yes, it is.

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Q. So perhaps we can deal with

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3 that first. In performing such a microscopic study
4 in order to satisfy oneself regarding the conducting
5 system, can you briefly tell us what the procedure
6 is, what is exactly done and how is it done and how
7 long does it take?

8 A. I can't really give you any
9 detail on that because it is a procedure that is done
10 by a pathologist, and a clinician would never have
11 anything to do with it.

12 Q. I would probably be better off
13 to ask then the pathologist about that.

14 A. The pathologist would be the
15 person you could ask.

16 Q. Do you know whether it does
17 involve the use of slides?

18 A. Yes, it does.

19 Q. And these are slides of heart
20 disease itself?

21 A. Yes.

22 Q. And those are obtained, I
23 would take it, by the pathologist in conducting his
24 postmortem examination of the heart?

25 A. Yes.

Q. Sort of a dissection of the
heart itself, is that correct?



1

2

A. I am not sure that I know

3

exactly how they go about looking at the conducting

4

system. I do know it takes a very substantial

5

number of slides of sections through the conducting

6

system, not just three or four, or half a dozen, but

7

hundreds and hundreds and that is why it takes so

8

much time.

9

Q. That would explain why it

10

takes a rather lengthy period of time to conduct the
test?

11

A. Yes.

12

Q. Now can you give us an estimate,

13

I believe before you did briefly refer to, my

14

recollection was eight or nine months, I may be

15

summarizing your comment improperly. Approximately

16

how long would you expect such a study to take to

17

complete?

18

A. Oh, I think if you had nothing

19

else to do perhaps you could accomplish this in a

20

time span shorter than I have suggested, but I am

21

talking about the problem involved in looking at

22

so many hundreds of sections which is quite different

23

to the way a pathologist, as I understand it, looks

24

at routine sections taken at post mortem.

25

Q. Are these various slides of



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G4

different sections of the heart compared?

A. Yes.

Q. One against the other?

A. Yes.

Q. In making enquiries regarding
the conducting system?

A. Yes.

Q. Can you assist me, in the
ordinary course when one could not devote his full
time and attention to that study, how long a time
period we would be talking about in the ordinary
course?

A. If he could not ---

Q. Devote his full time and
attention solely to that study, but if he had to
attend to his other business and his other duties
as well.

A. It would take months, I know.

Q. So we are talking months, not
weeks?

A. Oh, yes. That would be my
estimate from the information that I know about from
people who do that work.

Q. And to your knowledge was
such a study ever done with respect to the conducting



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2

system of Jordan Hines?

3

A. I don't know whether it was

4

done, but I would very much doubt it was done.

5

Q. You say you would very much

6

doubt if it was done, but you don't know?

7

A. No.

8

Q. I take it is fair then to

9

assume that in terms of your own recollection you
have never seen such a study?

10

A. No.

11

Q. Have you ever discussed such

12

a study, or the results of such a study with any of

13

your cardiology fellows, or residents, or fellow

14

cardiologists?

15

A. For Jordan Hines?

16

Q. Yes.

17

A. No.

18

Q. And if the results, if the

19

test had been done and the results reported, would

20

you have expected to have discussed those tests

21

A. Yes.

22

Q. So can we safely assume in the

23

absence of other evidence to the contrary, that these

24

tests were not done?

25



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3

A. I would assume they were
not done, but I don't know.

4

Q. To your knowledge.

5

6

A. I don't know whether they
were done or not.

7

8

Q. You have already told us that
wasn't the same kind of microscopic testing that
Vera Rose was waiting for, it wasn't the ---

9

10

11

12

A. She was really waiting for
sections to look at the muscle of the heart, but I
don't know whether in addition she wanted to see the
conducting system.

13

14

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Q. She may very well have, in
addition, wanted to see the studies on the conducting
system and we will ask her that when and if her
evidence is called. Let us assume just for the
moment that we are only dealing with that enquiry
which would be central or necessary to her deter-
mination of her theory of viral infection. I take
it that information would not be as extensive, and
would not be as time consuming as the procedure that
you have just told us about with respect to the
conducting system.

23

24

25

A. No, that should be accomplished
within the framework of any microscopic work in a



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post mortem of any sort.

Q. And when you were referring in your in-chief examination to those results, to the microscopic studies being given to Dr. Rose at a much later time, considerably later I think were your words, what you were referring to was not the microscopic studies on the conducting system, but the microscopic studies that related only to the diagnosis of viral infection?

A. Yes.

Q. And you are confident that it is that information that she did ultimately receive?

A. Yes. Well, I don't know whether she received it or not, but she said that she learned about the details when the police showed her the information.

Q. So you're indicating that she might not have received a formal report on the study, but she had received the information some time later?

A. Yes.

Q. And your recollection and correct me if I am wrong, was that she might have received that from the police?

A. Yes.



1

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3

Q. Or as a result of the police investigation?

4

A. Yes.

5

6

Q. So that I take it that some further studies were done by the police?

7

A. I don't know.

8

9

10

11

12

Q. Doctor, I am somewhat confused, and perhaps you can help me. Your evidence in-chief clearly was that ultimately she received the information that she required, and your recollection was that she probably, most likely, got that information from the police?

13

A. Yes.

14

15

16

Q. Could she have gotten that information from the police unless they had done some further testing on the heart tissue?

17

18

A. I don't know because I think the point that she made was that the information that she was shown was the autopsy report.

19

Q. Was the ---

20

A. The autopsy report.

21

Q. Which we have already seen.

22

23

A. Yes, but we hadn't seen that before, or she hadn't seen that before anyway.

24

Q. Now at the time that you were

25



1
2
3 discussing in your in-chief evidence the autopsy
4 report, and I am referring, Mr. Scott, to Volumes
5 17 starting at page 2871, and you were asked by
6 Mr. Lamek:

7 "Q. Dr. Rowe, in your opinion
8 what was the cause of death of Jordan
9 Hines?

10 A. At the time of the death and
11 the discussion that followed at the
12 morning conference we were not sure
13 what the cause of death was.
14 I think it was considered by Dr. Vera
15 Rose that this might indeed be a
16 viral infection affecting heart muscle,
17 and she felt that the background of
18 the disturbance that was noted with
19 the same rhythm - well, with the
20 rhythm disturbance and so on at North
21 York meant that there was some illness
22 going on in this patient and that this
23 event that occurred here, although
24 unexpected, might possibly be explained
25 by further examination at autopsy.
I think it was Dr. Costigan who was in
charge of the resuscitation, and my



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G10

"understanding from Dr. Vera Rose ---

Q. Yes?

A. --- was that she felt it was absolutely critical to obtain an autopsy in the situation.

She felt the most likely issue was viral and so asked in addition that viral examinations be done, and she said to me that if she had not been able to get that autopsy she felt she would report that situation to the coroner."

Now, you go on to say, Dr. Rowe, in the final paragraph on page 2872:

"But having got the autopsy she felt that it was reasonable to wait until the autopsy information was available. She saw the autopsy, as I understand it, and reported it to us as showing pallor of the ventricle, and that raised the possibility of still a myocardial infection, viral infection, but obviously the thing would depend upon what was revealed on the histology and so the decision was made to await



1

2

"results of the detailed autopsy,

3

the microscopic examination on the

4

autopsy, and that information was

5

some time in coming."

6

Now, clearly, Dr. Rowe, are you not

7

referring in that passage to information that was

8

still to be forthcoming after she had already seen

9

the preliminary autopsy report?

10

A. She hadn't seen the preliminary

11

autopsy report, she had been up to the post mortem,

12

she had actually been there at the time of post mortem

and had seen the heart.

13

Q. Okay.

14

A. And had described the appearance

15

of the heart muscle as pale, which is a feature of

16

a patient who has myocarditis.

17

MR. SCOTT: Let him finish.

18

MR. TOBIAS: I am sorry, Mr. Scott.

Go ahead.

19

MR. SCOTT: I am older, and I can't

20

be changed but he can be changed.

21

MR. TOBIAS: We hope so, we hope we

22

can be changed.

23

Q. Go ahead, Dr. Rowe.

24

A. She then ---

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THE COMMISSIONER: You haven't
proven it yet.

MR. TOBIAS: A fair observation, sir.

Q. Go ahead, Dr. Rowe.

A. On noticing that appearance
she reported back to us in the 8:30 conference about
the state of the myocardium and her continuing
impression that this was likely to be myocarditis
and that we would have to await the sections.

Q. What I am confused by, Dr. Rowe,
is perhaps I am attaching too much significance to
the specific words that you chose to use. What did
you mean when you said "She saw the autopsy as I
understand it", that she saw the actual procedure
of autopsy being done, or she saw the report?

A. No, she went up actually to
the autopsy room.

Q. And that is the results that
she reported to you?

A. To us in the next day, yes.

Q. So she was still awaiting, in
order to rule out her diagnosis, the information which
ultimately came in the form of the preliminary
autopsy report?

A. Yes.



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Q. And it was that preliminary autopsy report that you meant when you said that it was some time in coming?

A. Yes.

Q. Now ultimately she did get it.

A. She was shown it by the police.

Q. And on the basis of that preliminary autopsy report did she rule out, or in your view as a matter of fact in reading the preliminary autopsy report, is her possible diagnosis of viral infection ruled out?

A. I believe it is in the preliminary report, it doesn't specifically say there is no myocarditis, but it doesn't report anything abnormal.

Q. As far as you are aware was Dr. Rose satisfied with that preliminary autopsy report answered that concern?

A. I think so.

Q. But ruled out the viral infection?

A. I think so, as far as I am aware.

Q. So if I recall the discussion



G14

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2
3 that we had before as to the various possibilities
4 that had been raised, at the time that the preliminary
5 autopsy report finally came out what we are left
6 with in fact was a problem with the conducting system
7 as one possibility; and SIDS as another possibility,
8 all the other factors that we have discussed before
9 having been ruled out, is that fair?

10 A. I think that is correct, yes.

11 Q. And it is your recollection
12 that the very extensive and detailed microscopic
13 study that would have to have been done in order to
14 rule out a problem with the conducting system was
15 never done?

16 A. Yes, I don't have any evidence
17 it was done.

18 Q. Okay, fine. Now, could you
19 please refer, Dr. Rowe, to page 1 of the medical
20 chart of Jordan Hines, medical record of Jordan Hines,
21 which is a letter from Dr. Fowler to Dr. Dworak,
22 dated March 17th, 1981. Now, it would appear,
23 Dr. Rowe, wouldn't it, that at that date Dr. Fowler
24 himself, and the date that I am referring to is
25 March 17th, 1981, felt there was no satisfactory
explanation for Jordan Hines' death and he would have
to await a final postmortem examine to be completed?



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2

A. Yes.

3

Q. Is that a fair statement?

4

A. Yes.

5

Q. Now, it is also my understand-

6

ing that Exhibit 103, which is the medical record,

7

and particularly page 28 thereof which is the

8

preliminary autopsy report, that particular report

9

bears the date of March 8th, 1981. Now, I take it

10

that was the date the autopsy procedure itself was
done?

11

A. May I have the page number

12

again?

13

Q. Yes, page 28 of the medical

14

record of Jordan Hines.

15

A. Yes. And March 8th, your

16

question was ---

17

Q. My question was, was March

18

8th, 1981 the date on which the autopsy procedure
was carried out?

19

A. I think that is what that is

20

supposed to represent.

21

Q. Is there anything in that

22

document that assists us with the date that the

23

document itself was prepared?

24

A. No, I don't think it does.

25



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3 THE COMMISSIONER: We have been
4 through this several times that things will change.

5 MR. TOBIAS: I'm sorry,
6 Mr. Commissioner, I didn't catch what you said.

7 THE COMMISSIONER: Dr. Rowe has
8 promised us that things might change.

9 MR. SCOTT: What this Hospital needs
10 is a good lawyer in there and then everything will
11 be dated right but nothing done right.

12 THE COMMISSIONER: That's right.

13 MR. TOBIAS: Q. Dr. Rowe, do you
14 have any knowledge of whether or not Dr. Fowler
15 at the date of his March 17th, 1981 letter, had yet
16 seen the preliminary autopsy report?

17 A. I don't know but I would
18 read that letter that she had not.

19 THE COMMISSIONER: Which means I
20 think, so would I, apparently Mr. Lamek has promised
21 us we will have Dr. Fowler, so if you want to know
22 that question you can always ask him.

23 MR. TOBIAS: All right.

24 Q. Dr. Rowe, as I recall the
25 discussion in chief, and correct me if I am wrong,
you indicated that you thought Dr. Fowler had either



1
2
3 seen the autopsy, or had heard some of the results
4 of the autopsy from the pathologist without actually
5 having seen the report. Do you recall that discussion?

6 A. Yes.

7 Q. And that explains his knowledge
8 about the fresh hemorrhage around the base of the
9 brain?

10 A. Yes.

11 Q. And is it fair to assume,
12 or I am not even going to ask you to assume, do you
13 know as to whether or not at that time, the date of
14 this March 17th, 1981 letter, the pathologist had
15 also discussed with Dr. Fowler the possibility of
16 sudden infant death syndrome?

17 A. I don't know that.

18 Q. That is something again we
19 would have to ask Dr. Fowler?

20 A. Yes.

21 THE COMMISSIONER: I can understand
22 you wanting to ask Dr. Fowler, but some of these
23 questions I don't quite understand why you are asking
24 Dr. Rowe. Clearly with Dr. Fowler coming, unless
25 there is some reason you suspect either Dr. Rowe or
Dr. Fowler's answers ---

MR. TOBIAS: I had not suspected,



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2
3 but I had hoped that perhaps Dr. Rowe would have
4 some information regarding Dr. Fowler's ---

5 THE COMMISSIONER: I pay no
6 attention, with great respect to anything Dr. Rowe
7 told me that Dr. Fowler had said if Dr. Fowler comes
8 and says no, that is not so.

9 MR. TOBIAS: Mr. Commissioner,
10 specifically I only framed the question in the
11 manner that I did because he was commenting on
12 Dr. Fowler's letter not on his own letter.

13 THE COMMISSIONER: Okay.

14 MR. TOBIAS: And I do think it is
15 relevant and important to determine that, to deter-
16 mine his state of knowledge at the time he authored
17 this letter because on its face it could be ---

18 THE COMMISSIONER: The best man to
19 ask that of is Dr. Fowler himself.

20 MR. TOBIAS: Yes indeed if
21 Commission Counsel intend to call him, sir.

22 THE COMMISSIONER: He has just told
23 you he intends to call Dr. Fowler. You are calling
24 Dr. Fowler, are you not?

25 MR. LAMEK: I have indicated I
intended calling him.

MR. TOBIAS: I take it that is an



1
2 indication, Mr. Lamek, and not an undertaking?

3 MR. LAMEK: I have stated on
4 several occasions I propose to call Dr. Fowler and
5 I have not changed my mind.

6 MR. TOBIAS: Thank you, sir.

7 Q. Now after March 17th, 1981,
8 as a result of any of the information that you then
9 received, did you become satisfied in your own mind
10 with the SIDS explanation? I believe you gave some
11 indication in your evidence that you were satisfied
12 with the SIDS explanation, am I correct?

13 A. Yes, I was eventually.

14 Q. And in fact you did refer
15 to the Bain report in making that statement?

16 A. Yes, I did.

17 Q. Now, other than the Bain
18 report, is there any other piece of information,
19 any other fact, any other bit of knowledge that you
20 acquired after March 17th, other than the Bain report,
21 that satisfies you with the sudden infant death
22 syndrome explanation?

23 A. No, it was the Bain report.

24 Q. Solely the Bain report?

25 A. Yes.

Do you agree with me, Doctor,



1
2 that with respect to the preliminary autopsy report,
3 and indeed that document that has been identified as
4 the final autopsy report, the conclusions with
5 respect to sudden infant death syndrome are not
6 unequivocal, do you agree with that statement?

7 A. In view of the pathologist,
8 yes.

9 Q. And the pathologist, I under-
10 stand to be a Dr. Becker?

11 A. Yes.

12 Q. Who has some reputation, does
13 he not, for being a renowned expert in the SIDS field?

14 A. Yes.

15 Q. He is a man who is very
16 knowledgeable in the study of SIDS?

17 A. In the pathology of SIDS, yes.

18 Q. And in fact I note in his
19 preliminary autopsy report he uses phrases such as
20 "query sudden infant death syndrome". He also states
21 further down the page, the fourth line from the
22 bottom:

23 "This pathological evidence in conjunc-
24 tion with the clinical history makes
25 missed SIDS 'a possibility'."

He also says on the next line:



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"However, this does not explain the arrhythmias and further conclusions will have to await the examination of the conduction system."

So it is clear in his own mind he wasn't prepared to say at that point on the basis of the investigations he had done to that date that SIDS was the explanation?

A. No.

Q. Now you indicated again in answering Mr. Lamek's questions, and I am referring to Volume 17, page 2889, starting at line 1. Perhaps in fairness, Doctor, I will put the question - and the question appears on page 2888, and you were asked:

"Why then was this death not reported to the coroner before the police investigation started?"

A. I think that's a reasonable request and I think that we have asked Dr. Vera Rose about that very point, and her response was that she felt that the autopsy should be able to answer the question and she thought it was not unreasonable to await the result of the histology, and I think



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"that's the reason that the patient's
death was not reported to the coroner.

3

4

It did appear to all of us that

5

the episodes that occur prior to the

6

admission to the Hospital was serious

7

indeed and, so, we didn't have any

8

reason to believe this was anything

9

other than an illness and that was

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the conclusion that was reached."

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Now, in using the words "an illness",
would you include in that definition sudden infant
death syndrome?

A. Yes.

Q. And you view that as a clinical
condition, as an illness, as a disease; is that correct?

A. Yes.

Q. Now, even though it can be
viewed as such and come within that definition, is it
also not the case that by its very nature sudden
infant death syndrome is sudden?

A. Yes.

Q. And usually or not always,
but in a great many cases, expected?

A. Yes.

Q. In the case of Jordan Hines
was it unexpected?

A. Yes.

Q. And no question that it was
sudden?

A. Yes.

Q. And there was also no question,
it would appear, that at least in Dr. Becker's opinion,
sudden infant death syndrome was not the definitive
answer, it was a possible answer, is that fair?



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A. That is right.

3

Q. And you were aware at that

4

time that Section 10 of the Coroner's Act made

5

provision for the reporting of all deaths that were

6

sudden and unexpected?

7

A. Yes.

8

Q. Now, in light of that knowledge,

9

in light of that knowledge of Section 10, do you

10

think it was reasonable under all the circumstances

11

not to have reported it but to await the final autopsy
report?

12

A. Well, that was a judgment call.

13

Q. Yes.

14

A. I think it can be questioned.

15

Q. All right, thank you.

16

Now, one thing that has occurred to

17

me, Doctor, in reviewing the Bain report which

18

has been filed as Exhibit 48 -- do you have a copy
of that report in front of you, Doctor?

19

A. I have got it somewhere down
here. Yes, I do.

20

Q. I am specifically going to

21

refer you to page 18 of the Bain report, the last

22

paragraph on that page, Dr. Bain says that:

23

"At post mortem, the heart appeared

24

normal. The lungs showed congestion

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"and edema and fibrous thickening of the pulmonary atrials, suggesting chronic hypoxia. There was also persistence of brown fat and the brain showed glyosis in the brain stem in the region of the vagal nuclei. There was also considerable extra medullary..."

and I am not even going to attempt to pronounce the next word. It is h-e-m-a-t-o-p-o-i-e-s-i-s.

"These are all features of the sudden infant death syndrome."

Now, that is the end of the summary with respect to Jordan Hines. Obviously in Dr. Bain's view, those findings were sufficient to satisfy him that the most plausible account for death was SIDS. Do you agree with that?

A. I think, as I understand it, his diagnosis was based on the clinical aspects of the problem as well.

Q. Yes, I understand, and he clearly in other parts of his report deals with those clinical observations. But you agree with me surely that what he is saying in summary is that in his view on the basis of all available evidence at that time,



4 2 SIDS is an acceptable and plausible account?

3 A. Yes.

4 Q. Okay. Now, the same exact
5 quote appears in the preliminary autopsy report and
6 was noted by Dr. Becker, and yet having said that that
7 evidence in conjunction with the clinical history makes
8 the diagnosis of missed SIDS a possibility, he says:

9 "...that still doesn't explain the
10 arrhythmias and further conclusions
11 will have to await the microscopic
12 studies."

13 My point is this. We have Dr. Bain, who is reasonably
14 satisfied with the SIDS explanation; we have Dr. Becker
15 who apparently is not totally satisfied. Is there any
16 way in your mind, Doctor, to resolve that apparent
17 conflict, or do you see an apparent conflict to resolve?

18 A. Well, I think one is a pathologist
19 and the other is a clinician, and there is bound to be
20 some difference because the clinician has information
21 about the clinical events that occurred during life
22 about which the pathologist is not really qualified.
23 I think the discrepancy comes in that area.

24 Q. Now, correct me if I am wrong.
25 I do not see anywhere in the summary of Jordan Hines,



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which appears at pages 17 and 18, that Dr. Bain's directed his mind to the question of the arrhythmias. If I am correct that he did not direct his mind ---

MR. SCOTT: First of all, what are you referring to when you say there is no reference?

THE COMMISSIONER: Pages 17 and 18 of Exhibit 48, Dr. Bain's report.

MR. TOBIAS: Q. All right, I am not referring -- Mr. Scott, I think that is a fair interjection. I am not referring to the episodes of arrhythmia. He does not appear to qualify his opinion to the same extent that Dr. Becker did and does not seem to be concerned about bringing the reader's attention to the argument that the sudden infant death syndrome might not account for the arrhythmia.

Now, the absence of that observation in his report, does that lead you to believe, and you would have some knowledge because presumably you have spoken to him about this report, that he is not particularly concerned with the question of whether or not an arrhythmia of this type is commonly associated with SIDS?

MR. SCOTT: Well, Dr. Bain I take it is being called to give evidence as well. Is this not another question that might be referred to him?



6 1
2 It is really asking Dr. Bain why ---

3 MR. TOBIAS: Dr. Rowe.

4 MR. SCOTT: No, the question really
5 is what does Dr. Bain -- does Dr. Bain have in mind
6 a qualification, and it seems to me that that can best
7 be put to Dr. Bain.

8 Dr. Rowe has exhibited a lot of
9 qualities, but mind reading does not seem to be one
10 of them yet.

11 THE COMMISSIONER: There is also another
12 thing, Mr. Tobias. We are getting awfully close to
13 argument when you start to dissect this report and
14 say that it does not deal with this and it does not
15 deal with that. That is something that you can
16 always put to me at the end and say that you should
17 not rely upon it, if that is your position, or your
18 position may be that of course I should rely on it.

19 MR. TOBIAS: Ordinarily, sir, I would
20 not put that question to a witness except to this extent,
21 that it was my understanding that Dr. Rowe worked
22 closely with Dr. Bain in terms of gathering the data
23 for this and has discussed its contents and his
24 conclusions with him.

25 However, nothing turns on that particular
question. I do not think it is critical to my cross-



1
2 examination and I am prepared to move on to another
3 area.

4 THE COMMISSIONER: Yes, thank you.

5 MR. TOBIAS: Q. With respect, Dr. Rowe,
6 to the information that would have come to your
7 attention, I think after March of 1982 and the
8 information that I am specifically talking about is the
9 knowledge of certain digoxin readings found in the
10 tissues of Jordan Hines, after that knowledge came
11 to your attention, did this in any way cause you to
12 alter your view of this case or change your mind or
13 make you any less certain of the SIDS explanation?

14 A. Well, I am not qualified to
15 comment on what the information means in relation
16 to the digoxin.

17 Q. No, I am not asking you to
18 comment on that.

19 A. And therefore, I cannot put a
20 rating on how much concern I have. I agree that it
21 is something that has to be looked at by the experts
22 in the area. I still think that the evidence is really
23 very strong indeed for sudden infant death syndrome
24 in this patient.

25 Q. And that is still your view
today?



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A. It is still my view today.

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Q. Now, I take it before the

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information came to you with respect to the digoxin readings in the tissues that digoxin toxicity was not something in Jordan Hines' case that you considered a very strong possibility or had given much thought to?

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A. No.

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Q. It was when those readings came to your attention that you developed some concern with respect to that question?

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A. Yes.

12

Q. All right. Now, if I understand the last piece of evidence that you gave me, you are saying that in spite of that it did not really shake your belief in the SIDS explanation?

13

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A. I think that the clinical

16

history was so strong and the information of pathologic markers despite Dr Becker's view were equally strong, and I would add the additional factor that the heart weight was greater than normal, and that is another pathologic marker of SIDS, those features were the things that seemed to me to be most strong. I do not question that the matter of the digoxin observations has got to be examined.

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Q. Now, Doctor, you have referred

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2 in answering that last question to the clinical
3 history and your observations of same. Are you
4 referring in particular to the incident which occurred
5 prior to the baby being admitted to North York General
6 Hospital when he was found by his mother at home and
7 upon her picking him up and shaking him he responded;
8 is that one of the things that colours your view
9 on the SIDS?

10 A. That is one of them, and the
11 other episodes are the apnea and bradycardia that
12 persisted after that, you know, both in the hospital
13 outside and in our institution.

14 Q. Now, you do agree, and I
15 believe Mr. Percival covered this in his cross-
16 examination, that the apnea and bradycardia, both
17 of those are symptoms that are somewhat consistent
18 with digoxin toxicity?

19 A. Well, bradycardia is and
20 apnea may.

21 Q. Apnea might be as a result of
22 the bradycardia; is that not correct?

23 A. Yes.

24 Q. With respect to the incident
25 which occurred at home, I believe the exact words that
you used, and correct me if I am wrong, and I am now



1
2 referring to the evidence which you gave at Volume
3 17, page 2854 ---

4 THE COMMISSIONER: Page 2854?

5 MR. TOBIAS: Q. Yes. I am starting
6 at line 3, Dr. Rowe. The question that Mr. Lamek
7 put to you was:

10 "Q. I'm sorry, Doctor, I think I lost
8 the thread of your answer. Could you
9 just summarize again for me please what
10 you think is significant in the chart
11 in terms of understanding the death?"

12 Your answer was:

13 "A. Well, I think that the baby had
14 something that happened at home that
15 suggested that the breathing stopped.
16 That I think in later terms was felt
17 to be fairly characteristic of sudden
18 infant death syndrome, near miss it is
19 called. If it hadn't been that the
20 mother hadn't picked the baby up at
21 that time, the baby would have died.
22 And then the baby had instability with
23 brady/tachycardias and that became
24 the predominant feature together
25 with some infiltration in the x-ray



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2 "so that infection was raised as a
3 possible reason for these events and
4 then all that was being done was
5 observational at that point, apart
6 from the treatment of the possibility
7 of an infection, because it wasn't any
8 more clearer than that."

9 So you obviously attached some great significance to
10 this incident at home? Your own words were that the
11 child would have died at that time had it not been
12 picked up; is that a fair summary of how you view
that episode?

13 A. Yes, I think so.

14 Q. Now, is there a school of thought
15 which indicates and subscribes to the theory that once
16 sudden infant death syndrome starts, once it sets in,
17 it cannot be interrupted, that it does not react to
resuscitation efforts?

18 A. I think there are some who take
19 that position.

20 Q. I am sorry?

21 A. There are some who take that
22 position, but I only know the -- I am not an expert
23 in sudden infant death syndrome, but I know that if the
24 condition starts and it is what is known as a near
25



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2 miss, there is a high probability that it will recur.
3 Is that what you are referring to?

4 Q. No, what I am referring to
5 specifically is the work of Dr. Sidney Segal of
6 Vancouver, who is one of the leading proponents of
7 the theory that SIDS cannot be resuscitated.

8 Now, do you recognize that that theory
9 does exist, that school of thought does exist?

10 A. Yes.

11 Q. And there is some considerable
12 research that has been done on it?

13 A. Yes.

14 MR. TOBIAS: Mr. Commissioner, in
15 fairness to you, I do not intend to move into this
16 aspect at a great deal of detail at this time. I have
17 done some research, but again, I anticipate that ---

18 THE COMMISSIONER: Well, I would find
19 this relevant, strangely enough, but at this point
20 you are telling me that you are not going to deal with
21 this and this is a fact that interests me.

22 MR. TOBIAS: Except, sir, that it can
23 probably be best dealt with with a pathologist rather
24 than a cardiologist.

25 THE COMMISSIONER: All right, far be it
from me to delay you in the ---



1
2 MR. TOBIAS: Q. Now, Dr. Rowe, when
3 we were discussing the case of Kevin Pacsai there
4 was some discussion about a two-to-one heart block,
5 and you gave Mr. Lamek an explanation of what a two-to-
6 one heart block was.

7 Do you recall indicating at that time
8 that that kind of heart block is some objective
9 evidence of a problem with the conducting system?

10 A. Yes, it is.

11 Q. And anywhere in Jordan Hines'
12 chart can you find such objective evidence of problems
13 with the conducting system, and I am not referring
14 my question simply to heart block. Were there any
15 other clinical observations made or that you find in
16 the chart that might provide you with more than a clue
17 that might provide you with some objective evidence
18 of problems in the conducting system?

19 A. Well, I think there is a report
20 that he had a block when he was up at North York
21 Hospital.

22 Q. Yes.

23 A. Heart block.

24 Q. And that would in his case, as
25 in Kevin Pacsai's case, be some objective evidence,
correct?



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A. Yes.

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Q. Other than the one episode

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reported at North York General, is there anything that

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was observed while he was in the Hospital for Sick

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Children which would give us the same kind of

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objective indication?

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A. There was I think a commentary

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in the Emergency Room Department.

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Q. You are referring now to the

medical record of Jordan Hines, are you?

11

A. Well, I must have got it from

12

there.

13

Q. Perhaps you can be so kind as

to give me the reference?

14

A. I think it is page 58. Maybe

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that is not the page. I thought I had read the

16

reference to the fact that there was some block.

17

Q. If it turns out ---

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A. Perhaps I was mistaken.

19

Q. I am sorry, Dr. Rowe?

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A. I said perhaps I was

mistaken, but I thought there was a note made by

21

the admitting resident to that effect.

22

Q. Perhaps we can leave it thus.

23

If it does come to your attention later, and I am not

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1
2 asking you to specifically make an enquiry in this
3 regard or do another review of the chart, but should
4 such information come to you, perhaps you could pass
5 that along to Mr. Scott and he could then advise me
6 of what other objective evidence you wish to refer
7 me to; is that fair?

8 A. Fair enough.

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Q. All right, thank you, sir.

Now, we have talked, Doctor, about the episodes of apnea, of the brady/tachycardia problem and we have talked particularly of the incident at home with the baby coughing and turning colour and the mother waking it and we have also talked about Dr. Bain's conclusion and your acceptance of that.

Now, other than those factors that I have just outlined, are there any other factors which are important in your mind in explaining the death of Jordan Hines as a missed SIDS or a SIDS incident?

A. No, I know of no others except the one I have just mentioned about the heart weight.

Q. The heart weight. That is really the only other factor that you feel is central?

A. Yes.

Q. And now, one thing that I would like to know is this. Is it fair to say, in your view, that Sudden Infant Death Syndrome itself is a disease without specific autopsy characteristics?

A. Well, I don't think that the literature in relation to missed SIDS, that would apply to that point and I'm not sure what the current view in pathology is about the knowledge relating to



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the basal ganglia of the heart, which we would probably never look at for many years.

Q. Well, some of these pathological findings that are supported by Dr. Becker at the preliminary autopsy report, in particular, just as an example, the persistence of brown fat and findings such as the thickening of the pulmonary atrials, are those things that in your view are specifically related to SIDS and only to SIDS? Are they characteristic of SIDS?

A. They are characteristics of low-grade hypoxia, I believe. They are not a thing that you can identify and say that is SIDS, but I think the collection of abnormalities in a child of that history is what you would put together.

Q. All right. So, what you are saying is, it is not just the clinical findings post mortem pathologically, but it is relating those to the clinical history and the premortem events that were reported to you and it is the whole package taken as a whole together that allows you to draw a conclusion of SIDS? It is not one or two or three specific items standing on its own?

A. No.

Q. All right, that's fair.



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Now, perhaps we can turn, Doctor, to Kevin Pacsai's chart that was Exhibit -- forgive me, I'm not familiar with the Exhibit No. I have the Witness Copy.

MR. OLAH: It's Exhibit 106, Mr. Commissioner.

THE COMMISSIONER: Exhibit 106. You realize that Mr. Shinehoft is representing Mr. Pacsai?

MR. TOBIAS: Yes, I am aware of that, Mr. Commissioner. I don't intend to dwell on this particular case but there are several features of it that have a direct bearing on the Jordan Hines case that interest me.

THE COMMISSIONER: All right. I would be grateful if you would point them out as you go along because I find ---

MR. TOBIAS: Well, I can assure you, sir, that the questions that I intend to ask are only those that I feel in my own mind, and to an extent I suppose it is a judgment call, have some bearing on the Hines case. There are numerous questions that could be asked which I suspect that Mr. Shinehoft will go into and I do not intend to put those questions to this witness.

MR. SCOTT: Mr. Commissioner, I



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wonder, I don't want to be intemperate, but I wonder if now is the time, as Kevin Pacsai died four days after Jordan Hines. Perhaps my friend can tell us in advance what there is in the Pacsai death that he says points to a cause in the Hines death and then you can rule about whether he is making the connection before he asks the question.

MR. TOBIAS: Well, in particular, Mr. Commissioner, I don't intend to close off my own argument as to what the connections are, so, this is not ---

THE COMMISSIONER: No, no, you can argue anything you like.

MR. TOBIAS: No, no, I'm just saying this is not intended to be an exhaustive list but there are striking similarities in the two cases. For instance, the lack of any gross heart abnormality is one, the fact that digoxin wasn't a prescribed drug is No. 2, the concern with digoxin toxicity in Jordan Hines's case because of the readings obtained later when he hadn't been prescribed digoxin and in Pacsai's case, I believe that one of the exhibits in the medical chart is the autopsy report which specifies the immediate cause of death as being digoxin toxicity. Those are all striking similarities.



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3 There are others which I won't dwell on now, but it
4 certainly can be argued, I think, with some merit
5 that these two cases can't be separated and put into
6 air-tight, waterproof compartments.

7 There are elements which relate to
8 both and you have to have an understanding of both in
9 order to understand the whole.

10 THE COMMISSIONER: I want you to
11 understand the problem is that we only have one
12 Counsel dealing with Kevin Pacsai.

13 MR. TOBIAS: Oh, I understand that,
14 sir.

15 THE COMMISSIONER: He is concerned
16 with the cause of death of Kevin Pacsai and your
17 concern is the cause of death of Jordan Hines. The
18 fact that one may be somewhat similar to the other,
19 I suppose, might conceivably, and I think it was
20 tendered at the preliminary inquiry in a similar act,
21 that might be relevant for some purpose or other. It
22 doesn't really help me a great deal.

23 I'm going to have to make a
24 determination I suppose with every one of these
25 children. I doubt very much at the moment that any
determination of, because something happened to one
the same thing should happen to the other.



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However, go ahead.

MR. SCOTT: Isn't there, Mr.

Commissioner -- this is going to have to happen a hundred times and it seems to me that it has to be dealt with. Surely my friend's case comes down to this. He says that there may be a strong case that Kevin Pacsai died of digoxin toxicity, that is his argument, therefore, Doctor, looking at Baby Hines, don't you think there is a strong case in his case too.

Now, why doesn't my friend simply say to the doctor, what do you think of digoxin toxicity as a cause of the Hines death and I think we are all agreed that he should certainly ask that question of Dr. Rowe if he wants, but to ask him to analyse the Pacsai death when we are going to be treated to that only moments away is just going to prolong this inquiry beyond even the normal expectation.

THE COMMISSIONER: All right.

MR. TOBIAS: It seems to me, Mr. Commissioner, if I can interject, that ---

THE COMMISSIONER: It's going to be easier to let you start on the Pacsai and see what you're doing.

MR. TOBIAS: All right, that is



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3 acceptable, but may I just make the quick point that
4 the problem that you refer to, and I have some
5 sympathy with your other problem, but part of that
6 problem is inherent in the scope of this inquiry.

7 THE COMMISSIONER: Well, it isn't
8 inherent with you in the scope of this inquiry, it is
9 inherent with others because we have to deal with 36
10 babies. The great merit in your case is that you just
11 have to deal with one and therefore could concentrate
12 on that one and be of an enormous help to us if you
13 would concentrate on it. When you diffuse your efforts
14 and go to all these other babies, then you become as
15 mixed up as I am, and as some of the other Counsel,
16 with one baby or another.

17 Now, this way you could do it and you
18 could be of enormous assistance to us if you would
19 concentrate on Hines. However, you want to do it by
20 reference to the Pacsai and this is the experiment
21 and Mr. Shanahan and Mr. Shinehoft may suffer from
22 this experiment of yours, but you go ahead.

23 MR. TOBIAS: Well, I should say that
24 I assume as you also included Mr. Manning in this ---

25 THE COMMISSIONER: Mr. Manning didn't
ask any questions on any of these babies and I couldn't
understand that.



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3 MR. TOBIAS: No, but to the extent
4 that he represents a defined group of parents.

5 THE COMMISSIONER: Well, yes, but he
6 represents six and not one of them, as far as I
7 could make out, was ever referred to in the course
8 of the cross-examination.

9 MR. TOBIAS: I understand that, sir.

10 THE COMMISSIONER: And I find that
11 extraordinary.

12 MR. TOBIAS: I understand that, sir,
13 but can you agree with me that it wouldn't seem
14 reasonable to restrict Mr. Sopinka necessarily to
15 the four deaths in which his client was charged.

16 THE COMMISSIONER: I would not, most
17 decidedly not, because in that case the nurses on the
18 Trayner team are concerned with all 36 babies.

19 MR. TOBIAS: Well; no, no, that is
20 exactly the point I am making, sir, that it would be
21 unfair to restrict him because he is concerned with
22 more than the four, clearly.

23 THE COMMISSIONER: Yes.

24 MR. TOBIAS: And I think that anyone
25 acting for the parents in trying to find the answer
as to why their baby died has to be concerned with
more than that one particular case.



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3 THE COMMISSIONER: If I ever had any
4 powers of persuasion, they don't seem to be working
5 on you. Just go ahead and I'll see what happens.

6 MR. TOBIAS: All right, thank you, sir.

7 MR. ORTVED: Just before Mr. Tobias
8 does, I just take issue with his analogy with the
9 Pacsai death in terms of there not being any digoxin
10 prescribed for Pacsai. That probably was just a slip
11 on Mr. Tobias's part.

12 MR. TOBIAS: You are correct, Mr.
13 Ortved, I apologize. That has been brought to my
14 attention.

15 THE COMMISSIONER: All right.

16 MR. TOBIAS: Q. Now, Dr. Rowe, I
17 understand that your view on the Pacsai case,
18 specifically, and there was discussion of this in
19 your evidence in chief in Volume 17, page 2915. If
20 I understood your evidence correctly, is it fair to
21 say that at the time of death in March of '81 you had
22 no specific explanation as to the cause of death and
23 it was some time later, after the Bain report was
24 prepared, and you had read it, that you felt that it
25 offered the most plausible account regarding the
explanation of death. Is that a fair summary?

A. Yes.



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3 Q. All right. Now, I have looked
4 at the Bain report, Mr. Commissioner, specifically
5 page 27, which deals with Kevin Pacsai. At page 27 of
6 the Bain report, there is an indication that the first
7 thing that comes to mind, first diagnosis, is acute
8 adrenal insufficiency. Dr. Bain then goes on,
9 however, in his own report, to indicate that that
10 would apparently be ruled out by the information
11 gained on autopsy with respect to the size of the
12 adrenal glands.

13 There is also a reference in there to
14 Addison's Disease. Again, Dr. Bain himself hastens
15 to point out that that is ruled out on autopsy by
16 microscopic examination because it didn't reveal such
17 a condition.

18 Dr. Bain therefore appears to place
19 the most emphasis upon the peaking of T-waves,
20 which is characteristic of potassium intoxication and
21 failure to thrive, which is characteristic of
22 transient adrenal insufficiency. Is that a fair
23 summary of his findings with respect to this
24 particular infant?

25 A. Yes. I don't know whether it is
in the report or whether that was subsequently, but
I think his final view on this was that the patient



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3 had functional hypoadrenalism, which is a form of
4 the disease he originally thought it might be but
5 with apparently normal adrenal glands.

6 Q. All right. Is it fair to say
7 that in Dr. Bain's view the most plausible account
8 though is transient adrenal insufficiency?

9 A. Yes.

10 Q. Now, I take it that is something
11 different than just adrenal insufficiency?

12 A. No, it is the same disease in
13 the sense that both diseases cause the same effect
14 metabolically and potassium and everything else.

15 Q. All right. Then what is meant
16 by the term "transient"?

17 A. "Transient" means that it is
18 possible that it might resolve because there is no
19 disease to explain the adrenal abnormality. So, it
20 may resolve. It is conceivable that a patient with
21 that disease might resolve as compared to somebody
22 who has adrenal pathology, if you like, say, a
23 hemorrhage or something like that into the adrenal
24 gland where you wouldn't normally get better.

25 Q. Now, is this something that
would have specific characteristics on autopsy?

A. No.



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Q. All right. Would the finding on autopsy that the adrenal gland showed no anatomical abnormalities and no irregularity in size, would that necessarily rule out that theory?

A. I understand not. You know, I'm not an expert in this.

Q. All right.

A. This is just from my discussions with Dr. Bain.

Q. All right. So that, in fact, those factors of anatomical structure and size are considerations in the question of whether or not it rules out this cause, but they are not necessarily conclusive?

A. No.

Q. Is that fair?

A. Yes.

Q. Now, with respect to potassium levels themselves, do we find any relationship, Doctor, between digoxin levels in the blood stream and potassium levels?

A. Yes, I believe there is a relationship.

Q. All right. Is that relationship ---

MR. ORTVED: Mr. Commissioner, I know



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2 it is not intentional on my friend's part, but if he
3 could just let Dr. Rowe conclude his answer.

4 MR. TOBIAS: I apologize, Dr. Rowe.

5 A. There is a relationship. I'm
6 not sure that in ordinary therapeutic management of
7 patients that it is an important one.

8 Q. All right, that's fair. Is it
9 common, when we see elevated digoxin levels in the
10 blood stream, for that to be accompanied by elevated
potassium levels?

11 A. It may be, but you don't always
12 know.

13 Q. All right. And is there any
14 rule, to your knowledge, regarding ratios?

15 A. No, I don't have that information.
16 I would think that information might apply to those
17 with very high levels rather than ordinary therapeutic
levels.

18 Q. All right. Now, in view of the
19 autopsy findings with respect to Kevin Pacsai and,
20 in particular I am referring now to page 94 of the
21 medical record. Do you have a copy of the medical
22 record?

23 A. I do have that.

24 Q. Do you have it before you,
25



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2 Doctor? I only ask the question because Ms. Cronk
3 was good enough to remind me that the copy that I
4 am using is indeed the Witness Copy, I didn't have
5 my own copy, so, just so we can be sure that ---

6 A. The copy I'm using is her copy.

7 Q. All right. Well, there is
8 co-operation for you, there is a tangible example of
9 it.

10 Now, with respect to the comments
11 made at page 94 of that record, digitalis toxicity,
12 heart failure and the view of the pathologist that
13 the immediate cause of death is digitalis toxicity,
14 there would certainly appear, Doctor, to be some
15 inconsistency, some conflict between the version of
16 death commented upon in the Bain report and the view
17 of the pathologist. Can you be of any assistance to
18 us at all in helping us resolve that conflict?

19 A. Well, I'm not sure exactly of
20 the wording in the Bain report, I would have to look
21 at the summary again, but I think that wherever there
22 was any indication that there was digoxin level post-
23 mortem or tissues or whatever that came under
24 question, he said that that was an important issue
25 to consider. It couldn't be excluded as a possible
cause.



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3 Q. Yes, I think that is a fair
4 summary. In giving your own evidence in chief, I
5 believe that Mr. Lamek dealt with that question and
6 he asked you at Volume 17, page 2924, whether or not
7 you were prepared to accept the pathologist's
8 finding of digoxin toxicity:

9 "Q. Well, does that mean that you
10 disagreed with the pathologist's view
11 of it?

12 A. No.

13 Q. Were you prepared to accept that
14 the immediate cause of death of
15 Kevin Pacsai was digitalis toxicity?

16 A. We thought that most likely."
17 Now, today, has your view of that
18 changed?

19 A. No.

20 Q. All right. So that you are still
21 prepared to accept that finding of the pathologist?

22 A. I think that it has changed only
23 in the sense that at the time I thought digoxin
24 toxicity was the cause of death. I think that there
25 has been a whole lot that has gone on about our
knowledge of digoxin, as I think I have said many
times.



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Q. Yes.

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A. Therefore, I am not prepared to be quite as strong on that now as I was. I am prepared to let that matter be settled by those who are experts in whether that level that was found in that baby is the cause.

Q. All right. So that you are indicating, if anything, the strength of your belief that the immediate cause of death was digoxin toxicity has become somewhat less?

A. Yes.

Q. Over time?

A. Yes.

Q. And this is partly because of the reservations that you have become aware of with respect to the interpretation of dig levels?

A. That's all.

Q. All right. But it is fair to say that, as of today, you still prefer the digoxin toxicity theory to that of adrenal insufficiency?

A. No.

Q. Is that correct?

A. No, I don't think I meant to imply that. If I did say that, that's not what I meant.



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Q. Okay. Could you explain what
your position is?

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A. I have simply said that this
baby is in a category where I think others who are
experts in interpreting what that level means should
decide that issue. I think there is still a lot of
question about it.

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Q. All right. Then is this fair.
Are you saying that the cause of death could
possibly have been digoxin toxicity and also could
possibly have been adrenal insufficiency?

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A. Yes.

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Q. And you are prepared to bow to
the view of other experts in deciding which of the
two is more plausible?

A. Yes.

Q. All right, fine.

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Q. Now, on page 2917 of
Volume 17, Mr. Lamek asked you the following question:

"Do I take it what you are saying
to me, doctor, is that if Dr. Bain's
opinion on a review of this chart,
then lacking a better or more per-
suasive explanation of your own,
you are prepared to bow to that view?"

"A. We knew of other things that
had been obtained in an earlier
stage."

"Q. Yes. What other things?"

"A. The question of the digoxin
level."

When you were referring to digoxin
levels --

THE COMMISSIONER: Isn't this exactly
what he said?

MR. TOBIAS: I'm sorry, sir?

THE COMMISSIONER: Isn't this exactly
what he said? I'm sorry, I understand you repeated
this, but I felt this is exactly what Dr. Rowe had
been saying.

MR. TOBIAS: I am merely putting to
him what his previous --



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THE COMMISSIONER: Yes. All right.

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MR. TOBIAS: -- answer was, sir.

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THE COMMISSIONER: Yes. All right.

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MR. TOBIAS: Q. When you were

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referring to other things - and I think you meant
by "other things" the dig. levels that had been obtained

7

in an earlier stage - what earlier stage are you re-

8

ferring to? Are you referring to information that

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came forth prior to Dr. Bain's report?

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A. Yes.

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Q. And against that background

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the fact that those -- well, perhaps I should ask

13

you, did you have the information with respect to the

digoxin levels prior to seeing Dr. Bain's report?

14

A. Yes.

15

Q. So, you were aware of them

16

from whatever point in time that was onward?

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A. Yes.

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Q. And that predated your reading

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of the Bain report?

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A. Yes.

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Q. Now, against that background,

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does that shake in any way your conviction that Dr.

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Bain may still be right and that it still may have

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been adrenal insufficiency?

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2 A. Yes.
3 Q. It does shake it a little bit?
4 A. No. I still think he may be
5 right.
6 THE COMMISSIONER: I don't quite know
7 how you can shake a conviction that may be right.
8 MR. TOBIAS: Well, you can weaken
9 the conviction, it's lukewarm, sir.
10 THE COMMISSIONER: Yes. All right.
11 How much longer do you think you
12 will be?
13 MR. TOBIAS: I can finish with
14 Pacsai in about three minutes, sir. I have very few
15 questions remaining.
16 THE COMMISSIONER: Yes. All right.
17 MR. TOBIAS: And I would think that
18 would be the appropriate time for the luncheon break.
19 THE COMMISSIONER: After you are
20 finished with Pacsai?
21 MR. TOBIAS: Yes, I would think.
22 The only other questions I have relate to Allana
23 Miller and Janice Estrella. Miller will be perhaps
24 twenty minutes to half an hour; Estrella shouldn't be
25 more than ten minutes. I will be very, very brief.
THE COMMISSIONER: Mr. Tobias, I am



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not going to stop you at this point but I want to tell you I have not found that the divergence into Justin Cook and into Kevin Pacsai has been of much help to me in determining the cause of death of Jordan Hines, which is what you are most concerned with. I have not found it has been of help but, perhaps in argument, you may show it is of some help.

MR. TOBIAS: That is what I was about to say.

THE COMMISSIONER: I haven't found it so.

MR. TOBIAS: It would appear that it hasn't. You haven't seen readily any connection, and I accept that view, but that connection still may be established in argument.

The problem is, as you know, sir, that I know specifically why I am asking these questions and I do intend to direct argument to them later, but I don't think it would be appropriate to do that now.

THE COMMISSIONER: It is a good idea to have the judge presiding know where you are going; otherwise, he fails to take in the merits of your cross-examination - that's all.

MR. TOBIAS: Yes. I appreciate that.



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2 I appreciate that.

3 THE COMMISSIONER: If you can get
4 it through my... and I will leave the description to
5 you - just what it is you are heading for, you will
6 be much more productive. However... You want to do
7 some more questions on Kevin Pacsai, finish that off?

8 MR. TOBIAS: Yes, if I can just
9 finish that perhaps before the lunch break.

10 Q. Now, Dr. Rowe, on page 63 of
11 the medical record of Kevin Pacsai, I believe Dr.
12 Costigan noted, around the middle of the page:

13 "Sick sinus or digoxin toxicity."
14 And that note was made on March 11, 1981, so it was
15 clear that, at that time in any event, the possibility
16 of dig toxicity had at least occurred to Dr. Costigan;
17 it was in his mind.

18 A. Yes.

19 Q. Then, at page 67 of that
20 record, another note by Dr. Costigan:

21 "How did the potassium level get
22 from 3.7 to 7.7 in less than 12 hours?"

23 So, he obviously has some concern
24 with the potassium level and, as well, by virtue of
25 the prior note, some concern with respect to digoxin
toxicity.



J6

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2 Now, you told us before that there
3 was some relationship between digoxin levels and
4 potassium levels and that the higher the digoxin
5 levels, the higher the elevation you would expect to
6 see in the potassium levels, although you couldn't
7 give me a specific ratio.

8 Could that cast some light on
9 Dr. Costigan's question as to how the potassium level
10 became that elevated? Is it reasonable to infer from
11 that that that would be one possible explanation?

12 A. I suppose it might be. I
13 think he was more concerned at the change in the
14 potassium. I don't know whether it infers there or
15 some other parts to potassium changes in McMaster as
16 well.

17 Q. All right. You acknowledge
18 that it might be a possible explanation?

19 A. Yes.

20 Q. How strong an explanation
21 would you consider it?

22 A. I read his second comment as --
23 I think his second comment suggests to me - in fact,
24 the very first part of the page, the third line I
25 think, he talks about hyperkalemic arrhythmia. I
would have thought that was more in keeping with a



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disease that put up the potassium rather than a drug, because it is really quite a big shift. He had considered digoxin toxicity before and, now, he turns more specifically to potassium.

Q. So that, in your view, he seems to be moving away from that concern somewhat?

A. Well, you would have to ask him, I think.

Q. All right. That is fair.

Now, can you find any evidence, or can you direct me to any indication in the medical record of Kevin Pacsai which might suggest renal or pre-renal failure?

A. That would take a little examination because I would want to know the urine output and I would want to know the levels of the b.u.n. and so on.

Q. All right, that's fair.

Dealing with your own recollection of your review of the chart - and I realize that that may be somewhat hazy now, it is so long after the event - do you recall renal or pre-renal failure being something that you were particularly concerned about in this baby?

A. I don't believe that, in



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looking through the chart, there was any confirmed evidence that way. I don't remember. I don't think there was. But the b.u.n.s were normal.

Q. In any event, you don't recall that as being a large or significant factor with respect to this particular baby; is that fair?

A. Yes.

Q. And that is particularly so in light of the b.u.n. readings?

A. Yes.

MR. TOBIAS: Mr. Commissioner, perhaps we can break for lunch at this time.

THE COMMISSIONER: Are we now finished with Kevin Pacsai?

MR. TOBIAS: Yes.

THE COMMISSIONER: All right, then, until two-thirty.

--- luncheon recess.



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--- on resuming.

THE COMMISSIONER: Mr. Tobias.

MR. TOBIAS: Thank you, Mr.

Commissioner.

THE COMMISSIONER: Yes, Mr. Lalonde?

MR. LALONDE: Excuse me, Mr.

Commissioner, I would like to make one very short
comment about an observation that you made earlier this
morning about Mr. Manning's failure to refer to any of
the six children whose parents we represent.

I would like to point out that it
was our perception of Dr. Rowe's testimony to this
date that he has repeatedly referred to the fact that
we should ask our questions of the clinicians and/or other
experts and pharmacologists and others who will be
called, and Mr. Manning decided that, based upon those
answers and his references to those people, we would
reserve all those questions dealing with the specifics
to the people who could answer them best.

THE COMMISSIONER: Yes, all right.

Thank you.

Yes, Mr. Tobias.

MR. TOBIAS: Thank you, Mr.

Commissioner.

Q. Dr. Rowe, I would ask you to



AA2

look at the medical record of Allana Miller which was
filed as Exhibit 115.

If I can presume to summarize some
of the more obvious findings with respect to Allana
Miller, I understood that you felt the most complicated
series of heart problems and the most significant to
be the common atrium in this baby, no septum or wall
between the right and left atria and that apparently
she had been looked at in the fall of 1980, October to
December; she was in mild congestive heart failure and
was at home on diuretics and digoxin to control the
congestive heart failure and, as well, I understood you
to explain to Mr. Lamek that the original hope had been
to maintain her condition and allow her to grow and
get stronger and not, perhaps, to operate for three or
four years if that turned out to be possible. However,
it turned out that that was not possible. Her condi-
tion did not allow that. She failed to thrive and,
therefore, surgery was scheduled for March of 1981.

Is that basically a fair summary of
her pre-admission history?

A. Yes.

Q. Now, in particular with
respect to page 43 of the medical record, you see an
order written on the 21st of March at 2:30 to hold



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2 digoxin, and I believe you told Mr. Lamek that that
3 was not the first occasion on which digoxin was
4 ordered held. In fact, if we look at page 29 of the
5 record, there is another hold order written apparently
6 on March 19, 1981, some two days before.

7 A. Yes.

8 Q. Is that correct?

9 A. That is correct.

10 Q. And by reference to page 38
11 we see that, in fact, a dose of digoxin was administer-
12 ed at 21:00 hours on the 20th of March, which would
13 be after an order had been written on the 20th of
14 March at 15:00 hours to start digoxin again.

15 A. Yes.

16 Q. So that what we have, if I
17 can summarize, is the holding of digoxin late during
18 the day of March 19th, it is reordered on the 20th,
19 one dose is given late, very late indeed, on the 20th,
20 and then it is held again at 2:30 a.m. on the 21st.
21 So that we, in effect, have only one dose given
22 between the two hold orders.

23 Now, I understand that shortly
24 after the order was given to give digoxin at 2:30,
25 the terminal events started and, in fact, she went
into arrest at 2:40 a.m. That appears at page 54 of



AA4

1
2 the chart.

3 Now, we see from the digoxin assay
4 results in this chart that there was a digoxin level
5 found of 78 nanograms per millilitre.

6 Do you agree with me that that is
7 obviously a reading with which you have some concern;
8 it is very, very high?

9 A. Yes.

10 Q. All right.

11 Do you agree with me that the onset
12 of terminal events in this baby, as we have seen in
13 some of the other babies, was sudden?

14 A. Yes.

15 Q. And that the deterioration,
16 once it started, was rapid?

17 A. Yes.

18 Q. Now, in light of the fact
19 that what we have is only one dosage administered in
20 prescribed dosage between the two hold orders, would
21 you agree with me that if, indeed, this is a case
22 of digoxin toxicity, probably the dose would have
23 been given a short time before the onset of terminal
24 events?

25 A. Yes.

Q. Do you think that is a



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reasonable assumption?

A. I think so.

Q. Fine.

Is it also fair to say that, assuming the hold order written on the 19th was complied with and, again, that there would only have been one dose in a therapeutic range, is it fair to assume that if, indeed, it is a case of digoxin toxicity, the most likely administration would have been in a single overdose of fairly large proportion?

Do you think that is a fair assumption?

A. Yes, I think so.

Q. All right.

Now, again, I asked you some questions with respect to the death of Justin Cook. You recall I discussed with you the different routes for administration: Intramuscular, oral, IV bag, IV bolus?

A. Yes.

Q. In order to save time, I am going to summarize. Please stop me and correct me if you think I am giving you an unfair summary.

I thought we had concluded that in the case of Justin Cook if indeed we were dealing



AA6

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2 with a case of digoxin toxicity from a single over-
3 dose which was given shortly before the onset of
4 terminal events, if those were the conditions we were
5 dealing with, that the most likely administration
6 would have been administration via IV tubing or
7 bolus.

8 A. Yes.

9 Q. Do you think, given the
10 circumstances surrounding the terminal events of
11 Allana Miller, that, given the same set of assumptions,
12 you would come to the same conclusion, that the most
likely route of administration would be by IV bolus?

13 A. Yes.

14 Q. And, again, that is because
15 of the characterization of the very sudden and
16 rapid deterioration and the very high post mortem
reading?

17 A. Yes.

18 Q. Now, I noticed when you were
19 giving evidence regarding Kevin Pacsai, and I am
20 going to summarize it for you but, in fairness, I will
21 give you the reference. You testified at page 2969
22 in Volume 17 to the following effect: That you were
23 somewhat concerned with digoxin levels that had been
24 obtained on assay and that you thought that perhaps
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2 Pacsai might have received more digoxin than had
3 been ordered and, therefore, the dosages given were
4 checked and that at that point you were satisfied
5 that the dosages prescribed were appropriate. The
6 next concern was that maybe the baby had received
7 more than the prescribed dosage and, therefore,
8 Dr. Fowler, I believe you said, enquired into the
9 possibility of an administration error, and he
10 satisfied himself that there had been no administra-
11 tion error and, in particular, he had reviewed that
12 question with the head nurse. You also said, I
13 believe, that Dr. Fowler did prepare a report re-
garding his enquiries re these possibilities.

14 Do you recall giving that evidence
15 in those general terms?

16 A. Yes.

17 Q. Were any similar enquiries
made with respect to Allana Miller?

18 A. I am not sure whether there
19 were later or not. I think in the case of Miller
20 the level was reported to the Coroner as soon as it
21 became known.

22 Q. All right.

23 To your recollection, were any
24 similar studies made or reports written with respect
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2 to Justin Cook?

3 A. I am not sure whether there
4 were or not. Again, that was reported to the
5 Coroner.

6 Q. Well, if I can help you
7 particularly with respect to the case of Allana
8 Miller, I believe you said in Volume 18 at page 3233
9 in response to the following question from Mr. Lamek:

10 "Q. But, Doctor, did you not have
11 a continuing interest and concern..."

12 And the answer to the question:

13 "A. Of course, but it was an
14 investigation of the police and we,
15 as I have said before, took the
16 position that they were investigating
17 the condition; that they should - they
18 would be asking the questions and we
19 were going to support the position
20 on that investigation as much as we
21 could, as they wanted."

22 Do you recall making that statement?

23 A. Yes, I do.
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Q. Would it appear from that that perhaps similar inquires and reports weren't made with respect to Allana Miller?

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A. Well, I don't know what the police specifically did. I don't recall that I was asked about that or not.

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Q. All right, that's fair.

Is it fair to summarize the hospital's position, and please stop me if you think this is an unfair summary, that apparently in your view anyway once the police were involved and once the coroner was involved in conducting his investigation, in effect, not only did that terminate any obligation you thought you had in terms of on-going investigations but almost that you thought that by making independent inquiries you might somehow interfere with the police investigation. Is that fair?

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A. Well, I think that is one of the viewpoints, yes.

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Q. All right. And therefore, I take it that there was an active decision made, at some point, by someone, that perhaps the hospital, rather than muddling into the broth and ruining it, would do nothing, would leave the entire thing in the hands of the authorities. Is that basically what



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was done?

A. I think that was done, but of course, we did do something about the digoxin.

Q. Yes, I am aware of the fact that certain controls were put into place.

A. Yes.

Q. But I am talking about, not so much preventative measures now, as natural inquiries and questions being asked and investigations being undertaken in order to answer the questions yourself. You felt that wasn't necessary because ultimately the police investigation and the coroner's investigation would answer those questions?

A. Yes, and we joined with the police in meetings over the next several days about that.

Q. All right. Now, with respect to the report that you referred us to in the Pacsai case, that is, Dr. Fowler's report, reporting on the inquiries he made, I would assume, correct me if I am wrong, that ultimately that report was handed over to the police, that document was made available to them?

A. Well, I'm not sure when they got it, if they got it and so on, but I assume that that



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was done.

Q. All right. Without indicating at what time it was handed over, do you have a recollection that ultimately that information was made available to the police?

A. Well, I don't know exactly. All I know is that the coroner must have been informed about this by Dr. Fowler. I don't know if the police got this later or the next day or when. That was on the Friday the twenty...

Q. All right. Now, in fact, I don't recall ---

MR. SCOTT: We're just getting a date, hang on.

A. The 20th was the day that the report was sent to Dr. Carver.

Q. The 20th of March?

A. And I believe that -- you will have to ask Dr. Fowler that question but I believe that he would have given that information to the coroner.

Q. All right. Now, I don't recall seeing you testify regarding inquiries of the type that were made in the Pacsai case in any of the babies that we dealt with preceding Pacsai.



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A. No.

Q. All right. It's obvious, therefore, that at the time of Kevin Pacsai's death, not only was the question of digoxin toxicity being entertained for the first time, but it was being very seriously considered by the hospital and that's why these inquiries were made?

A. Yes.

MR. SCOTT: If that is a summary of the doctor's evidence, is it true that he said that he never considered digoxin toxicity in any of the preceding deaths? I didn't understand him to say that, I understood him to say that the ---

MR. TOBIAS: Well, I don't think that I have put to the witness that statement. I don't think that I have suggested that it was never considered. I have only suggested this was the first time inquiries of that scope were made and was that consistent with a special concern at that time.

MR. SCOTT: I don't want to get into a fuss about it and the record will speak for itself, but it does raise a problem of summarizing a whole bundle of evidence and then going on to a question. I wouldn't want you to conclude that the witness accepts the summary.



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MR. TOBIAS: All right, I think that's
a fair comment.

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MR. SCOTT: As long as that is fair
game I will sit down.

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MR. TOBIAS: No, no, I think that is
a fair comment.

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Q. Dr. Rowe, let me just spend a
minute clarifying that point so that I understand it.
I had understood you to agree with me when I said I
didn't recall you giving evidence of similar inquiries
being made with respect to any of the deaths preceding
Pacsai. Am I correct in that?

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A. Over the question of looking at
the way in which the drug was administered on the
ward and the concentration in the bottles and that
sort of thing, that is correct.

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Q. I'm sorry, could you repeat that
answer?

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A. That is correct.

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Q. Okay.

A. We had not done an examination
of the concentration of the drug in the bottles or
of the specific administration of specific doses in
the past.

Q. All right. Now, with respect to



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2 those two specific things then, I am correct that the
3 Pacsai case was the first time you recall that that
4 was specifically done?

5 A. Yes, that is my recollection.

6 Q. All right. And is that consist-
7 ent with a particular concern at that time, and I am
8 not saying that you didn't have any concern before
9 that, but is that not consistent with the very
10 particular and sharply raised concerned at that
11 particular point in time?

12 A. Yes.

13 Q. All right, fine.

14 Now, as well, you gave evidence at
15 page 3234 of Volume 18, which I think is fairly
16 summarized as follows: You were asked to speculate,
17 if you will, on what the most likely explanation
18 would be if an accidental overdose in Allana Miller's
19 case had prescribed readings of 78 nanograms per
20 millilitre and I believe your evidence was that the
21 most likely kind of accidental administration of such
22 an overdose would occur during a resuscitation. Do
23 you recall giving that evidence?

24 A. Yes.

25 Q. All right. Now, dealing with the
arrest notes and the doctors' notes with respect to



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the resuscitation efforts of Allana Miller, are you in a position to assist me as to whether or not part of the resuscitative efforts in her case was the administration of digoxin?

A. In Allana Miller?

Q. Yes, in Allana Miller's case.

A. No, I don't believe digoxin was officially given.

Q. I'm sorry, could you repeat that, sir?

A. I don't believe there was any indication digoxin was given.

Q. All right, during the resuscitation efforts?

A. Yes.

Q. So, would you agree with me that it is highly unlikely then that your explanation of the assumed accidental overdose actually occurred?

MR. SCOTT: Well now, Mr. Commissioner, it is the middle of the afternoon I know, but what the doctor has said is that there was no evidence that Allana Miller got digoxin. I don't believe there is any doubt about that and he said that if there was to be an intentional administration, an accidental administration of digoxin, it would most likely occur



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at that time.

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Now, those two statements can stand

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together, there is no inconsistency as my friend

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suggests.

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MR. TOBIAS: Oh, no, I have not

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suggested an inconsistency at all.

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MR. SCOTT: It is argument, not

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evidence.

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THE COMMISSIONER: Well, I have lost

track of what your question is. What is it you want?

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MR. TOBIAS: All right, simply this.

12

We have established that, to Dr. Rowe's recollection,

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there was no administration of digitalis, as far as

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the resuscitation efforts.

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THE COMMISSIONER: All right.

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MR. TOBIAS: And I wasn't trying to

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point out an inconsistency in his testimony, I was

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merely saying is he satisfied against the background

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of that fact that it was highly unlikely in her

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particular case that an accidental overdose was

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THE COMMISSIONER: I thought he said

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that before.

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MR. TOBIAS: During resuscitation.

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THE COMMISSIONER: Oh.

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3 MR. TOBIAS: You know, I don't want
4 to waste a great deal of time on it, Mr. Commissioner.

5 THE COMMISSIONER: No, I know, but he
6 said before, he said it was unlikely.

7 MR. TOBIAS: Well, now, in fairness
8 to the witness, he was asked to speculate by Mr.
9 Lamek. He was asked to presuppose an accidental
10 overdose and he said presupposing an accidental
11 overdose, what would be the most likely explanation
12 and I think he gave a very valid answer, that it
13 would likely be administered during a resuscitation.
14 I am merely trying to establish to my satisfaction
15 and to the satisfaction of the others that that
16 probably didn't happen in this case and that is the
17 only question that I want to put to him.

18 MR. SCOTT: Mr. Commissioner, in the
19 end, it may not matter, but it depends on what the
20 accident is. If the accident is that the nurses
21 alleged during resuscitation to have administered
22 more digoxin than was called for, that accident could
23 not have occurred because no digoxin was called for.
24 If the accident was to administer digoxin rather than
25 some other drug, then that accident may be quite likely.
It seems to me it is a question of argument. Dr. Rowe
has said what the record reveals about whether digoxin



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3 would have been utilized in this case. He has also
4 that at what point he believes, if there was an
5 accident, it was most likely to have occurred and
6 surely that has got to be the end of it.

7 THE COMMISSIONER: Well, I think,
8 Mr. Tobias, you can move on.

9 MR. TOBIAS: All right. Allow me,
10 Mr. Commissioner, and with Mr. Scott's permission
11 then, to move on, but before I do to simply put the
12 question then directly, not in any hypothetical
13 sense.

14 THE COMMISSIONER: All right.

15 MR. TOBIAS: Q. Are you satisfied,
16 Doctor, on your view of Allana Miller's chart, that
17 it is unlikely that she received an accidental
18 overdose of digoxin during resuscitation efforts?

19 A. I don't think I can be sure of
20 that because if it was given by accident it might not
21 have been recognized.

22 Q. All right, fair enough. Could it
23 have been given and not noted?

24 A. That's what I mean.

25 Q. All right. And given that
possibility, you can't really speculate on whether an
accidental dose was given or not. Do I understand



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that to be correct?

MR. ORTVED: He said he could speculate on perhaps what was given. That's what he's saying.

THE COMMISSIONER: Well, I thought the speculation was it was unlikely but perhaps I am wrong.

THE WITNESS: No.

MR. TOBIAS: Well, that really was all I said, was it unlikely.

THE WITNESS: You know, I thought it was unlikely but when you put the question to me, is there no, if there was no note on the resuscitation list that there was digoxin on the list, then does that merely exclude the possibility that it was still given accidentally and I don't think it does.

MR. TOBIAS: Okay, I agree with that. So, what you are saying is the fact that there was no note of it doesn't exclude the possibility of it having been given accidentally?

A. No.

Q. All right.

THE COMMISSIONER: It would be unlikely that there would be ---

MR. TOBIAS: It would be unlikely --



BB12

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3 I was about to summarize that. It would be unlikely,
4 given the fact that there is no note of it having
5 been given, is that fair?

6 A. I'm losing you.

7 MR. TOBIAS: You have succeeded in
8 making it very complicated, Mr. Scott.

9 THE COMMISSIONER: It would be
10 unlikely that there would be a note in any event.

11 MR. TOBIAS: In any event, I am
12 prepared to move on. I understand it even if Mr.
13 Scott doesn't.

14 MR. SCOTT: Well then, that small
15 victory has been achieved.

16 MR. TOBIAS: Q. All right, lastly,
17 Dr. Rowe, if I can just ask you some very brief
18 questions with respect to the medical record of
19 Janice Estrella, which has been filed as Exhibit 91.

20 The terminal events in the case of
21 Janice Estrella were on January 11th, 1981, as I
22 understand. At that time, Doctor, was there a --
23 let me rephrase that. At that time, I understand that
24 there was already in place, in the hospital, a form
25 of therapeutic drug monitoring, is that correct?

A. Yes, I think that is so. I'm not
exactly sure of the date it started.



BB13

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Q. All right. I'd like to ask you whether in January, early January, prior to January 11th, 1981, whether or not it was routine to add autopsy, take samples and submit them on a routine basis for digitoxin toxicity.

A. Digoxin toxicity.

Q. I'm sorry, for digoxin toxicity?

A. No.

Q. All right. That would be somewhat unusual then at that particular time? It was not done on a routine basis?

A. That's right.

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Q. You indicated in questioning from Mr. Lamek in Volume 16, page 2701, that a sample was indeed taken at autopsy from Janice Estrella and submitted for digoxin level. You were not sure why that was done except the only explanation that you could put forward were the high antemortem levels that had been tested.

A. Yes.

Q. Is that a fair and accurate summary basically of that evidence?

A. Yes.

Q. In putting forward that explanation, it is recognized that at the time those high antemortem levels would have been out of the ordinary, is that not so and some cause for concern?

A. Yes.

Q. On autopsy, who would request the digoxin level to be taken, would that be the consulting physician at the time of arrest; would it be the staff physician in charge of that patient; or would it be the pathologist?

A. It might be any one of those, I'm not sure who specifically.

Q. Do you know in the case of Janice Estrella who did order the digoxin reading?



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A. Well, it has been previously testified that Dr. Freedom did.

4

Q. It was Dr. Freedom?

5

6

A. I don't know whether he did, but that was what was put down.

7

8

Q. I am sorry, Dr. Rowe, I didn't catch the last part.

9

10

A. I don't know whether he did. I think he has disputed this a little bit but I believe that is what previous testimony was.

11

12

Q. In any event you would assume that there was a written requisition made?

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A. Not in a situation like this. Oh, there must have been consent, yes, but there wouldn't be a requisition from a doctor probably, it would have to come from a pathologist.

17

18

19

Q. I see, so what you are saying is that the requisition that was filled out for pathology, for the lab rather, would probably be signed by the pathologist?

20

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A. Yes..

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Q. And would the question then of communicating to the pathologist the desire for a dig., would that be done perhaps orally?

A. Yes, probably.



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Q. So we wouldn't know unless we spoke to the pathologist in this case specifically whether or not it was Dr. Freedom who requested the dig. level?

A. Yes, I think that would be so.

Q. Okay, fine. Now, it appears on pages 156 through 159 of Janice Estrella's chart.

MR. MARSHALL: I am sorry, what page are you at?

MR. TOBIAS: Pages 156 to 159, Mr. Marshall.

Q. It appears there were several samples taken and tested for digoxin level. In particular, I am interested in the sample that is referred to at page 156 No. 889241, and there is a notation there that you drew our attention to "gutter blood".

Then there is another sample which appears at page 157, also drawn on January the 11th, 1981, no time having been recorded, which shows the same identical reason and the same identical specimen number, again 72 nanograms, 889241, that would be one in the same sample as the one that was previously noted as being possibly contaminated, is that correct?



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A. I would read it that way.

Q. And then page 158 we see another notation of a sample drawn January 11th, 1981, no time indicated, but that bears a different specimen number.

A. Yes.

Q. And the only reading available there was greater than 4.7?

A. Yes.

Q. Can I take it obviously from the fact that there is a different specimen number, that that was not one and the same sample as the one we previously referred to as being contaminated?

A. Yes.

Q. Can I take it because the only information we have is that the reading was greater than 4.7, that although it isn't specifically referred to on this page, can we assume there wasn't sufficient sample drawn for dilution?

A. I don't know because I don't know whether there were any dilutions on that, I can't remember.

Q. So in the absence of a specific notation that the sample wasn't sufficient, you would think it might be a dangerous speculation



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to speculate that it was insufficient and perhaps
we should ask Dr. Ellis that directly?

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A. Yes.

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Q. Okay. I take it that the
notation on page 156 "gutter blood" you have already
indicated is in handwriting that you can identify.

7

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A. Yes.

9

10

Q. It is clear obviously,
Doctor, isn't it, that there is nothing on the
printed form itself that the computer put out which
would indicate contamination of that sample?

11

12

A. That is correct.

13

14

Q. But for that notation you
might never have raised the possibility of a contamin-
ated specimen, is that correct?

15

16

A. No.

17

Q. No, I'm sorry you ---

18

A. You mean from that report?

19

Q. From that report in the absence
of the handwritten comment.

20

21

A. From that report you wouldn't
be able to tell, I agree.

22

23

Q. Okay. So again it might be
somewhat dangerous when we look at the other specimens,
689246 to automatically assume that it was not

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contaminated just because there was nothing on
the report that says that it was?

4

A. Yes.

5

Q. Is that correct?

6

A. Yes.

7

Q. And the real answer is we

8

really don't know in the absence of other evidence.

9

A. No.

10

Q. In the absence of other evidence

11

I suggest to you we don't know about any of these
specimens. It is certainly possible that any one

12

or more of them may have been contaminated, and

13

unless that were drawn to our attention we couldn't
be sure, is that correct?

14

A. Not from that printout.

15

MR. TOBIAS: Thank you very much,

16

Dr. Rowe, I have no further questions.

17

MR. SCOTT: My friend, I hope my

18

friend hasn't overlooked the evidence of Dr. Taylor

19

that was read in about how those samples were obtained.

20

As long as he hasn't, it was given at the Preliminary

21

Inquiry and he described, you will recall we read it

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to Dr. Rowe, he described one sample being gutter

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blood and described that as being contaminated. He

24

described the other sample as having been milked from

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CC6



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2 the leg. Dr. Rowe I think gave his opinion that
3 would provide an unreliable sample he believed,
4 according to his information. I just don't want
5 my friend to depart without ---

6 MR. TOBIAS: No, I was aware of
7 that, that forms part of the record. Thank you,
8 Dr. Rowe.

9 THE COMMISSIONER: Mr. Olah, do you
10 claim the right now, or did you lose your right forever?

11 MR. OLAH: No, I wouldn't want that,
12 sir.

13 THE COMMISSIONER: All right.

14 CROSS-EXAMINATION BY MR. OLAH:

15 Q. Doctor, following up on that
16 last exchange I am a little lost, on the Estrella
17 sample. Normally in autopsy, and this was an autopsy
18 request I understand it, was it not?

19 A. I think so.

20 Q. Where would the sample be
21 taken from?

22 A. Where would the sample be
23 taken from?

24 Q. The sample of blood?

25 A. I understand that most often,
I am told this, but I haven't been there while they



1
2 have done it, that it is taken from the heart itself.

3 Q. And how then - that is by
4 simply inserting a syringe and extracting some blood.

5 A. A syringe with a needle through
6 the heart.

7 Q. How would contamination with
8 fluid from the pleural cavity occur? I don't know
9 if this is within your expertise. If you can help
10 me I would appreciate it because I am a little
11 confused.

12 A. How would contamination --- ?

13 Q. How would contamination have
14 occurred in this case when you are simply inserting
15 a syringe with a needle into the heart, how do you
16 get pleural or fluid from the pleural cavity in there?

17 A. Well, my understanding is
18 that this specimen, this is the Estrella we are
19 talking about?

20 Q. Yes.

21 A. Was not obtained in the
22 usual way at that time of the autopsy.

23 Q. That is where Dr. Taylor had
24 to go and take it some other time.

25 A. He had to open up the body
after the autopsy had been completed, so there would



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be no heart with blood in it to take the sample from
in the usual way.

3

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Q. And so he would simply inject
a needle into the pleural cavity?

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A. He would get what he could I
suppose, and I think he will have to answer as to
exactly how he got that.

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Q. Thank you. Now going back to
an exhibit that was filed, Exhibit 153, you will
recall that was the document that was filed by
Ms. McIntyre with the normal vital signs. I just
have one very quick question on that, if we could
have Exhibit 153 for the witness please.

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A. I have it.

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Q. Have you got a copy of that?

16

A. Yes.

17

18

Q. Just simply the question I
had was, these normal vital signs that are listed
here are for a normal baby. Were those vital signs
changed at all for the types of babies that we are
dealing with here, namely babies with fairly serious
cardiac conditions?

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A. Yes.

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Q. So just take as an example
the heart rates, or respiratory rates, what kind of

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range would you expect in babies of this kind, would there be a serious difference?

A. Yes, there is a major difference in the numbers. You would expect the heart rate to be higher than 100 per minute. Let's take the case of a six month old as is on that, the normal heart rate is given as 110 and the respiratory rate is 30 a minute. But in a baby with heart failure which the majority of these babies had, it would have a heart rate of certainly about 140-150 or more per minute.

Q. In going through the medical reports I noticed most of these babies had very high heart rates.

A. Yes.

Q. So that would be normal given the kind of cardiac condition they had?

A. Yes.

Q. And similarly with the apex?

A. Yes.

Q. Would that be - I am sorry, the respiratory rates, would that be the same kind of observation?

A. Yes, they are usually about double the value that is given there as normal.



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Q. What about electrolytes, just very briefly, would they be any different?

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A. No, the electrolytes should be normal, but of course in many of these babies they were abnormal because of in part their heart failure, and in part the treatment.

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Q. Thank you. I would like to move to a different area if I may very briefly, and please bear with me, I know it has been a long ordeal for you. I would like to go to the Code 25 setting and resuscitation.

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Before getting into that area, can you assist me in this regard, was there any internal documentation, or manual, that was available during this period of time which would have prescribed what was to go as a standard drug on a crash cart?

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A. I think that the person who is mostly likely to be able to answer that question very accurately is the head of the Resuscitation Committee. I think that it is true that there were guidelines in the manual that were provided by that Committee, which outlined the type of medications that would be appropriate in the crash cart.

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Q. And these guidelines, were they to be followed fairly strictly?





Rowe, cr.ex.
(Olah)

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A. Well, there was obviously flexibility in this, because the Head Nurses in each floor had responsibility for the drugs that were on the cart, and they would respond to the needs of the physicians who were on that floor, in the sense that there might be a different requirement for drugs in a patient who has cardiac disease from say a child who has a tonsil, is just in to have his tonsils out.

Q. That is understandable. Was there such a special need on Wards 4A/B?

A. Yes, I think so. I think there would be a variety of additional medications that they might want to have, I don't know exactly, but the Head Nurses would be the people that would know to what extent they adjusted the contents of the drug covered, or the drug drawer.

Q. Would it be possible, and perhaps Mr. Scott could help us in this regard, to perhaps provide those guidelines at some time, at the witness' convenience, or at Mr. Scott's convenience, Mr. Commissioner?

MR. SCOTT: We will look into it, Mr. Commissioner.

MR. OLAH: Thank you.



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Q. Now, I guess from reading the records you really didn't have much involvement with crash carts, but from your understanding was there digoxin on those crash carts in Wards 4A/B during the period we are talking about?

A. I didn't know, but I gather that on the evening when the digoxin was sought on crash carts, the evening of the ---

Q. The 21st.

A. The 22nd was it?

Q. It was the evening of ---

A. The Saturday evening anyway of that major weekend. There was no digoxin, my understanding is there was no digoxin found on the crash cart on 4A/B, but there was digoxin found in other crash carts in the Hospital.

Q. All right. In fact that was the question that I wanted to put to you next. That is, it was after the evening of the 21st, in fact it was a daily check as I understand it of crash carts on 4A/B.

A. I am not sure of how intensive that was, but I believe there was a very major move the first night, and I presume that went on.

Q. And as far as you understand



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there was no digoxin ever found on any of the crash
carts, either on the 21st or on the subsequent dates?

4

A. Yes, to my understanding.

5

6

Q. And of course the 21st was
the day on which Justin Cook died?

7

A. Yes.

8

9

Q. I'm sorry, that was Miller
that died on the 21st.

10

A. Miller on the 21st?

11

Q. Yes.

12

A. Yes.

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Q. So we can exclude the
possibility of a digoxin error, can we not, I think
as you have indicated, because digoxin was not
on that crash cart as you are aware, as far as you
are aware?

17

A. Yes, wasn't on the crash cart.

18

19

Q. And similarly it wouldn't have
been on the crash cart on the 22nd when the subsequent
Baby Cook died?

20

A. Yes.

21

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Q. Now do I also understand,
Doctor, that many of these drugs on crash carts are
pre-filled, that is a syringe is there with the
measured dose already measured out ready for use?



CC15

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A. I don't know that answer.

3

Q. I would like to then turn to

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a different area, Doctor, and that is intramuscular

5

injections. I think you have already testified that

6

there is muscle necrosis that occurs if intramuscular

7

injections are given?

8

A. Yes, that is my understanding.

9

Q. By necrosis, we mean death of

10

tissue. Would that be something that would be
visible to the naked eye?

11

A. No, I don't mean you would

12

lose a huge section of muscle, I think it is just

13

some irritation of the muscle.

14

Q. Would there be some visible

15

bruising?

16

A. There might be.

17

Q. Would that be something that

18

might be noted on autopsy, post mortem?

19

A. I am not sure, it might be.

20

I suppose it would be noticeable if there had been

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an injection made, but I don't know whether patholo-

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gists would have incised the area or done sections

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of the area or whatever. I am not sure whether they

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would be able to differentiate that from anything

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else given intramuscularly.



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Q. I see, but you believe, and
I know we are dealing outside your area of expertise,
but you believe that if there had been such an
injection, certainly a needle mark would have been
left?

A. Yes.



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And so that the absence of such notation on autopsy reports would, in your opinion, tend to exclude injection of this sort in the preceding several hours of death?

A. I am not sure because I am not sure how commonly pathologists look for needle marks when they are doing a regular autopsy. I mean, I think they would look pretty carefully if they were doing a medical-legal autopsy, but I am not sure about a regular autopsy.

Q. Well, bearing in mind some of the babies in the terminal months or terminal days of March, and again we are probably dealing outside your area of expertise, would you expect that to be one of the things that pathologists would look for?

A. I suppose they would, yes, to look for external marks on the body.

Q. Thank you. I would like then to show you a document, Doctor, and see if you can assist me in recognizing and identifying the document. If you would be good enough to take a moment and just review it. Do you recognize that document, Doctor?

A. No, I do not.

Q. Do you see that on the bottom it says "Hospital for Sick Children" date January 1977,



1
2 revised March 1980?

3 A. I do.

4 Q. Do you see on the top of the
5 page "Nursing Employment Policies"?

6 A. Yes.

7 Q. Does that assist you at all?

8 MR. SCOTT: The witness has said he
9 does not recognize it. That is the end of it. I will
10 look into it and see if this is what it appears to be.
11 I have never seen it before.

12 MR. OLAH: Well, it is hard to under-
13 stand how Mr. Scott has not seen it since his office
14 provided it to me.

15 MR. SCOTT: If that is so, then we will
16 agree to it. I did not realize that we had provided
17 this, and I, like Dr. Rowe, have never seen it before.

18 MR. OLAH: Well, I can maybe approach
19 the problem in a different way.

20 MR. SCOTT: Why do we not put it in
21 and mark it A.

22 THE COMMISSIONER: I think we might
23 as well ---

24 MR. SCOTT: Elevate it to a number.

25 THE COMMISSIONER: I think we may as
well give it a number.

MR. SCOTT: Well, a high number.



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MR. OLAH: The one next in sequence.

3

I think it is 157.

4

MR. SCOTT: Can you tell me who from
my establishment produced this for you?

5

6

MR. OLAH: It is provided by
correspondence, Mr. Scott. I am not sure who the
signatory of the letter was, of the transmittal letter,
but I would be glad to undertake to give it to you.

7

8

9

MR. SCOTT: Did you recognize the letter-
head?

10

11

MR. OLAH: I think it had your signature
on it, Mr. Scott.

12

13

MR. ORTVED: Can I have a copy?

14

THE COMMISSIONER: Well, Mr. Olah, what
do you call this document?

15

16

MR. OLAH: It is an extract from a
hospital manual relating to nursing employment policies,
Mr. Commissioner.

17

18

THE COMMISSIONER: Is this the same
hospital manual that we had earlier?

19

20

MR. OLAH: I do not know. That is what
I was hoping the Doctor could assist us on. It may be
a separate manual for nurses.

21

22

THE COMMISSIONER: And what is it on,
what subject? Hospital manual on what?

23

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MR. OLAH: It is on nursing employment policies.

4

5

THE COMMISSIONER: Nursing employment policies. And the number, please?

6

THE REGISTRAR: 157.

7

THE COMMISSIONER: 157.

8

---EXHIBIT NO. 157: Extract from document entitled "Nursing Employment Policies".

9

THE COMMISSIONER: Would you save us one, Mr. Olah?

10

11

MR. OLAH: Yes, I am sorry.

12

13

THE COMMISSIONER: What did you want to bring to somebody's attention? What part of that did you want to bring ---

14

15

16

MR. OLAH: Well, I think all of the pages were provided by Mr. Scott and I think they should all go in.

17

18

THE COMMISSIONER: Yes, I know, but what particular ---

19

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MR. OLAH: It would be page 2, and I can approach the problem without the document itself. I am sure the Doctor will be able to assist me.

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Q. Perhaps to assist you, Doctor, if you could look at the second page of the extract that has been given to you, in particular under the



6
1 heading "Approved General RNA Functions", you will
2 see "Administration of an Oral Medication if it has
3 been poured by an RN who assumes full responsibility
4 for it."
5

6 The point I was trying to get at, and
7 maybe you can assist me without any further ado, is
8 RNAs, Registered Nursing Assistants cannot give any
9 medication to patients?

10 A. That is my understanding, yes.

11 THE COMMISSIONER: Not even an aspirin
12 or anything like that?

13 THE WITNESS: No.

14 MR. OLAH: The only exception that
15 you are aware of, I suggest to you, Doctor, is the
16 one that I pointed out to you, that is, where an
17 oral medication has been prepared by a registered
18 nurse?

19 A. And she assumes responsibility
20 for it.

21 Q. And she assumes responsibility.
22 In particular, a Registered Nursing Assistant cannot,
23 and the same thing with Registered Nurses, they cannot
24 administer IV medication?

25 A. No.

Q. So that it would be most unusual,



1
2 would it not, Doctor, for a Registered Nursing
3 Assistant who cannot prepare medication to be anywhere
4 near a medication cabinet?

5 A. I suppose unless she was watching
6 the RN prepare the medication.

7 Q. But if there was an RNA going
8 through the medication cabinet, that would be something
9 that would be most unusual and probably noticed?

10 A. Yes.

11 Q. And commented on?

12 A. I would think so.

13 Q. Now, there are a couple of
14 small matters I would like to clear up, Doctor, because
15 I have had trouble assembling the pieces as we have
16 been going through.

17 Is it fair to say that autopsy reports
18 in many of these cases are really necessary to under-
19 stand what the real cause of death has been in a
20 particular child?

21 A. I think it is very helpful
22 in confirming and even clarifying on occasion, yes,
23 the diagnosis.

24 Q. Because as in one case, I
25 believe it was Cook, you felt at one point that the
death was consistent with blue spell?



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A. Yes.

Q. And it was only upon receiving the autopsy report that the real cause of death became apparent?

A. Yes.

Q. And not only in this case, this unusual setting that we are working in is an authopsy report really quite necessary, but also digoxin readings are necessary in addition to autopsies to be sure as to what the precise cause of death is in any one situation?

A. In this last group of babies, yes.

Q. That is the group of seven in addition to Cook?

A. Yes.

Q. Because without digoxin readings being available, one cannot be sure that you can exclude digoxin toxicity as the real cause of death?

A. Yes, I think I said that in the testimony before.

Q. Now, there is something else I would like to clarify with you and that is Code 23. We have talked about Code 25 situations. Is Code 23 simply a nurse calling the resident paediatric on



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the floor?

3

A. Yes.

4

Q. And then that is only for the

5

purposes of examining the baby if the nurse feels

6

it is necessary?

9

7

A. In a hurry.

8

Q. In a hurry.

9

A. Yes.

10

Q. Now, there was something else

11

that puzzled me and that is what is the association between
some of these cardiac diseases and liver size.

12

Throughout the notes we see that the liver is extended

13

beyond the right costal margin, is it?

14

A. Yes.

15

Q. Three or four centimetres.

16

Can you explain to us why the liver size is of
assistance in diagnosing these cardiac situations?

17

A. It enlarges because it becomes

18

engorged with blood. It is sort of a back pressure

19

effect when the pump is not working well, and the liver

20

is very close and in full communication with the right

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atrium almost so that it is a large organ and it is

22

the one that becomes obviously fairly congested

23

fairly quickly and is accessible to the hand to assess

24

its size.

25



1
2 Q. Similarly, there have been
3 references to spleen size. Is there some relationship
4 between heart failure and spleen size?

5 A. Yes, that is not usually quite
6 as helpful to physicians because it is a smaller organ
7 and does not reflect the change quite as obviously
8 as the liver.

9 Q. Now, during the course of your
10 evidence at one point, and I would be glad to give
11 you the page reference, you talked about some
12 literature that suggested that there was a digoxin-
13 like substance produced in exhumed bodies. I do not
14 think we ever got the name of the reference or the
15 literature.

16 A. No, you did not because there
17 is not any. I was mistaken on that, and I had thought
18 that it was digoxin produced a substance-like -- at
19 least bacteria produced a substance like digoxin and
20 the reference was to the fact that bacteria produced
21 breakdown digoxin to produce metabolites.

22 Q. Thank you. Now, there was
23 another thing that fascinated me and that is you talked
24 about ECG strips and that they may be of assistance
25 to this Commission in determining whether digoxin
toxicity is evident in the terminal events.



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2 I think you suggested that the length
3 of the initial -- it may affect the lengths of the
4 initial between the end of the P wave and the
5 beginning of the QRS wave. Do you recall giving that
6 evidence?

7 A. Yes, the application of that
8 comment is really confined to patients who have
9 therapeutic toxic changes. In other words, when a
10 patient is on digoxin and you may be wanting to know
11 whether he is getting up to a point where there is
12 some toxicity occurring, the electrocardiogram can
13 be helpful. But it is not so useful in a situation
14 where you have got a massive overdose or in a patient
15 who is dying because the patient then can have
16 findings that are very similar.

11 15 Q. I am sorry, I did not hear
16 that.

17 A. The patient who is dying
18 ordinarily, without any evidence of digoxin, can have
19 an electrocardiogram that looks like digoxin toxicity.

20 Q. Now, this brings me to the point
21 that I wanted to clarify. Were these babies always
22 on some sort of a monitoring device or were they put
23 on a monitoring device when the nurse felt that there
24 was an emergency occurring?
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2 A. No, many of them would be
3 on a monitoring device while they were very ill, yes,
4 before the final event.

5 Q. Now, in those situations would
6 the administration -- let us use a hypothetical --
7 of a large dose of digoxin have an impact on the
8 ECG strip?

9 A. Yes, it could do; it would
10 do probably.

11 Q. And I take it that these ECG
12 strips are kept in a Zebra packet?

13 A. No, the ECG strips are used on
14 the floor and they may or may not be kept for the
15 hospital record.

16 Q. Well, in this case where in
17 late March there was a suspicion of digoxin toxicity,
18 were not the ECG strips kept to see if they would be
19 of assistance in determining whether digoxin toxicity
20 was in fact a possibility?

21 A. You are talking about Miller
22 and Cook?

23 Q. I am talking about Miller and
24 Cook and Pacsai.

25 A. Yes, well, Pacsai was the first,
I think, where this question emerged. So, you know, it



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was a day or two you are talking about here.

Q. Well, the question I had is whether the strips were kept?

A. Well, I do not know whether they were kept or not. If they are not in the record they were not kept.

Q. Well, in some of the records that I have gone through there might be a reproduction of one page, but generally they are not in the records. Would they be available somewhere else?

A. No, I do not think so because if they are kept they are usually either -- if it is a consecutive series they are sometimes mounted in the heart station the next day and returned to the record or they may be kept in the Zebra package, but that is unusual. The more usual way it is handled by residents is that they take a portion of the strip and will tape it in the hospital record, but you do not see very many of those.

Q. Well, has any one ever looked at the cardiograph strips in this case relating to, say, Cook and Miller to see if there is any evidence of digoxin toxicity to be found on those strips?

A. I do not know whether they have or not. The people at the time of the death would probably be looking at that strip pretty closely.



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2 Q. Well, you told us that looking
3 at the strip at the time of death would not be of
4 assistance. We would be looking at the strip some
5 time prior to death, would we not?

6 A. Well, it depends. They might
7 not make a strip. You see, it is a monitor and they
8 would only record if there was some big problem going
9 on.

14 9 Q. Oh, I see. So strips are not
10 printed out continuously?

11 A. Automatically, no.

12 Q. Would you agree with me that
13 if strips were available they may be of great assistance
14 in determining whether digoxin toxicity was a factor
15 in a death?

16 A. They might.

17 Q. And would you agree with me
18 that if there are such strips available that they
19 should be produced and examined?

20 A. Oh yes.

21 MR. OLAH: Perhaps, Mr. Commissioner,
22 we could ask Mr. Scott to make enquiries what strips
23 are available and whether they can be produced and --
24 I am sorry? ~

25 MR. SCOTT: Well, I think anything we



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2 had you now have in the record.

15 3 THE COMMISSIONER: Well, Dr. Rowe seems
4 to indicate there might conceivably, and he certainly
5 did not promise, there might be some somewhere else.

6 MR. SCOTT: Well, we will look and if
7 Dr. Rowe afterwards can tell me where I might get
8 someone to start looking, we will look.

9 THE COMMISSIONER: All right. Could
10 we consider that. What about now, Mr. Olah?

11 MR. OLAH: Well, Mr. Commissioner, I
12 will be about 10 more minutes and I know you are in
13 a hurry so I will bow until tomorrow.

14 THE COMMISSIONER: Well, I am not in
15 a hurry. It is one of those things that will go on
16 without me, that is all.

17 MR. OLAH: Well, we cannot say that
18 about this Commission.

19 THE COMMISSIONER: Well, so far it has
20 worked that way but I do not know whether it will
21 always be that.

22 Well, I think until 10 o'clock tomorrow.
23 You are available tomorrow?

24 MR. OLAH: Absolutely.

25 ---Whereupon the hearing adjourned until 10:00 a.m.
Wednesday, August 31, 1983.

